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# SOCIOMETRY

*A Journal of Inter-Personal Relations*

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## CONTENTS

SPONTANEITY THEORY IN ITS RELATION TO PROBLEMS OF INTERPRETATION AND MEASUREMENT—J. L. Moreno and Florence B. Moreno .....	339
PSYCHODRAMA AS EXPRESSIVE AND PROJECTIVE TECHNIQUE—John Del Torto and Paul Cornyetz .....	356
FEAR OF VIOLENCE AND FEAR OF FRAUD—Gustav Ichheiser .....	376
SECTIONAL VARIATIONS IN WELFARE ESPECIALLY OF THE WHITE POPULATION—Edward L. Thorndike .....	384
SOCIOMETRIC METHODS OF REGROUPING WITH REFERENCE TO AUTHORITATIVE AND DEMOCRATIC METHODS—J. L. Moreno and Helen H. Jennings .....	397
SOCIOMETRIC MEASUREMENT AND CHANCE—Joan Henning Criswell .....	415
A SURVEY OF SOCIOMETRIC AND PRE-SOCIOMETRIC LITERATURE ON FRIENDSHIP AND SOCIAL ACCEPTANCE AMONG CHILDREN—Esther B. Frankel and Reva Potashin .....	422
PSYCHODRAMATIC RESEARCH PROJECT ON COMMODITIES AS INTER-SOCIAL MEDIA—Ernest Dichter .....	432
RESEARCH NOTE ON THE NEGATIVE VALUE OF SOCIOMETRIC TESTS IN COOPERATIVE GROUP FORMATION—Henrik F. Infield .....	433
FACTORS IN SOCIAL CLEAVAGE AMONG COLLEGE STUDENTS—Harry Manuel Shulman and Gerhardt Saenger .....	433
BOOK REVIEW .....	434
ANNOUNCEMENTS .....	441
MAN IS THE MEASURE—Read Bain .....	452

938  
113



## SPONTANEITY THEORY

IN ITS RELATION TO PROBLEMS OF INTERPRETATION AND MEASUREMENT

J. L. MORENO AND FLORENCE B. MORENO

*Psychodramatic Institute, Beacon, New York*

### I. THEORY OF SPONTANEITY

*Conservation of energy and the function of spontaneity.* The place of the s factor in a universal theory of spontaneity is an important theoretical question. Does the s factor emerge only in the human group or can the s hypothesis be extended within certain limits to sub-human groups and to the lower animals and plants? How can the existence of the s factor be reconciled with the idea of a mechanical law-abiding universe, as, for instance, with the law of the conservation of energy? The idea of the conservation of energy has been the unconscious model of many psychological theories, as, for instance, the psychoanalytic theory of the libido. In accordance with this theory Freud (2) thought that, if the sexual impulse does not find satisfaction in its direct aim, it must displace its unapplied energy elsewhere. It must, he thought, attach itself to a pathological locus or find a way out in sublimation. He could not conceive of this unapplied affect vanishing because he was biased by the physical idea of the conservation of energy. If we, too, were to follow here this precept of the energy pattern, and would neglect the perennial inconsistencies in the development of physical and mental phenomena, we would have to consider spontaneity as a psychological energy—a quantity distributing itself within a field—which, if it cannot find actualization in one direction, would flow in another direction in order to maintain its volume and attain equilibrium. We should have to assume that an individual has a certain amount of spontaneity stored up to which he adds and which he spends as he goes on living. As he lives he draws from this reservoir. He may use it all or even overdraw. Such an interpretation is, however, unsatisfactory according to spontaneity research, at least on the level of human creativity. The following theory is herewith offered. The individual is not endowed with a reservoir of spontaneity, in the sense of a given, stable volume or quantity. Spontaneity is (or is not) available in varying degrees of readiness, from zero to maximum, operating like a psychological catalyzer. Thus he has, when faced with a novel situation, no alternative but to use the s factor as a guide or searchlight, prompting him as to which emotions, thoughts and actions are most appropriate. At times he

has to invoke more of this, say, spontaneity, and at other times less, in accord with the requirements of the situation or task. He should be careful not to produce less than the exact amount of spontaneity needed—for if this were to happen he would need a “reservoir” from which to draw. Likewise he should be careful not to produce more than the situation calls for because the surplus might tempt him to store it, to establish a reservoir, conserving it for future tasks as if it were energy, thus completing a vicious circle which ends in the deterioration of spontaneity and the development of cultural conserves.\* Spontaneity functions only in the moment of its emergence just as, metaphorically speaking, light is turned on in a room, and all parts of it become distinct. When the light was turned off in a room, the basic structure remained the same, but a fundamental quality had disappeared.

The physical law of the conservation of energy was accepted during the second half of the nineteenth century in many quarters as a universal axiom. Many scholars regarded energy in all its manifestations as though it would be a volume of water in a glass. If the water disappeared entirely or in part, it could not have vanished. It must have been consumed, spilled or transformed into an equivalent. They assumed that the volume of energy which it originally had must have been constant at any point of the process. Freud likewise speculated with the assumption that libido energy is to remain constant. If therefore the flow of libido energy is interrupted and inhibited from its aim, the dammed up energy must flow elsewhere and find new outlets, i.e., as aggression, substitution, projection, regression or sublimation. These phenomena which appear on the surface apparently unrelated could now be expressed in terms of a single principle, libido energy. In such a closed psychodynamic system there is no place for spontaneity. Just as libido energy must remain constant psychological determinism is absolute. As a factor like spontaneity is not admitted to operate the psychodynamic factors causing a behavior manifestation—if they cannot be traced to recent events—must be deferred farther and farther to an elusive past. The findings of spontaneity research has made such forced systems of intellectualization unnecessary. The unity and universality of explanation which they offered has become too high a price to pay. It led to over-simplification of interpretation and to a dangerous inertia hindering the development of new methods of fact finding and experimentation. As long as spontaneity was a

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\*For an extensive discussion of this problem see “Mental Catharsis and the Psychodrama,” page 216-218, *Psychodrama Monograph*, No. 6, Beacon House, N. Y.

vague and mystic notion such rigid systems could prosper almost undisputed, but with its emergence as a vigorous concept, as a clearly discernable and measurable agent, the tide began to turn in favor of more flexible systems.

The fact that spontaneity and creativity can operate in our mental universe and evoke levels of organized expression which are not fully traceable to preceding determinants, causes us to recommend the abandonment or reformulation of all current psychological theories openly or tacitly based upon psychoanalytic doctrine, for example, the theories of frustration, projection, identification and sublimation.

In spontaneity theory energy as an organized system of psychological forces is not entirely given up. It reappears in the form of the cultural conserve. But instead of being the fountainhead, at the beginning of every process such as libido, it is at the end of a process, an end product. It is evaluated in its relativity, not as an ultimate form but as an intermediate product from time to time rearranged, re-shaped or entirely broken up by new spontaneity factors acting upon them. We are here returning with an answer to the question heading this chapter. It is in the interaction between spontaneity-creativity and the cultural conserve that the existence of the *s* factor can be somewhat reconciled with the idea of a law-abiding universe, as for instance with the law of the conservation of energy.

*Favorable and unfavorable conditions for the emergence of the s factor.*

A type of universe which is *open*, that is, a universe in which some degree of novelty is continuously possible—and this is apparently the type of universe in which human awareness has arisen—is a favorable condition for the *s* factor to emerge and to develop. It could not exist in a type of universe which is closed to novelty, i.e., one which is determined by absolute laws. Spontaneity, if placed into such a universe by chance, would rapidly deteriorate because of the impossibility of its growth and disuse of its function. If a subject would know in advance what kind of a situation he is to meet, as to form, place and time, he could prepare himself for it without spontaneity. But if some *s* would be used by him during the preparation, there would be no proof that it has been operating.

A certain degree of unpredictability of coming events is a premise upon which the idea of the *s* factor must rest. One can visualize a universe (or rather polyverse or multiverse) which is dominated by chance. One can visualize a universe which is dominated by the *s* factor reducing the range of chance, and further a universe which adds regularity and order, so-called laws of nature, to chance and to spontaneity.

High probability of events as to time, place, and form is not a condition favorable for the development of the *s* factor. The greater the probability of recurrence of certain events, the smaller is the probability of *s* emergence. It is rather their non-recurrence which is a favorable condition of the development of *s*, and which increases the probability that the *s* factor will emerge in the future. But the non-recurrence of events in itself, i.e., the continued novelty of events, is also not a strict proof that spontaneity is operating. The ever-changing character of events may be the results of pure chance. A test has to be constructed, therefore, which differentiates chance events from spontaneous events, just as it differentiates the repetition of events from novel events.

Another problem is the frequency of the *s* factor as it becomes manifest in the responses of an individual to situations. One individual may disclose a high frequency of *s*, another a low frequency of *s*. If, for instance, a response of an individual to varying unprecedented situations is continuously adequate and effective, compared with the responses of another individual for whom the situations are equally unprecedented, then we can conclude that the *s* factor operates with greater frequency in the one case than in the other—the premise being always that the individuals tested do not know in advance what kind of a situation may arise and what type of response may be required in order to meet it adequately.

Another important aspect of human growth is that the range of new experiences reaching the infant is quantitatively greater than for the adult, and that is of importance not only for the mentally superior infant, but for every infant. The need to acquire certain basic skills like eating, walking, speaking, etc., stimulates a process of learning in many ways dissimilar to that of the memorized and planned learning of the adult. The child is, in his growth, so closely related to the phenomena in their status nascendi, that a differentiation between situation and response is artificial. The closeness of the child to the status nascendi of experience keeps him in an atmosphere of spontaneity and creativity, rarely experienced again in later life. The new situations and the intensity with which he can experience them resemble creative acts to such a degree that creating becomes to him a matter of course. Because of this atmosphere of continuous new experiences coming on, to create and "to be" seems to him the same thing. No event can become stale when so many new events can replace the old ones and promise a world of endlessly oncoming events—a world of pure creativity. He may create as an individual actually very little—most of his acts resembling those of his peers, but the logic of the child in feeling creatively is justified by the *mode*

of his experience, its status nascendi, rather than by the uniqueness of his experience.

Thus, we see that the frequency of the emerging *s* factor is most unevenly distributed throughout our life time and that the human infant, during the first few years of life, is confronted with new experiences and new situations, continuously challenging his responses to a degree unparalleled in other life periods. Our assumption here is that the larger the number of new situations, the greater is the probability that a comparatively large number of new responses will be made by that individual even if we think that it would be impossible for him to be aware of all situations emerging around him and to respond to all new situations in an adequate fashion. But to a certain number of these situations, he must respond.

## II. FORMS OF SPONTANEITY

There are two methods by which one can prove the existence of the *s* factor. The *negative* method by logical (8) or intuitive (1) analysis demonstrates that laws of nature are not absolute but themselves products of evolution; it concludes by inference that there must be a factor like spontaneity unlimited by them. The *positive* method (3, 4, 5, 6, 7) demonstrates the existence of spontaneity by *experiment*. It begins with its direct perception and demonstrates its operation by tests, measurements, and the results of its training. It is the experimental method which promises a sound basis for spontaneity research.

On the basis of experimental study, we have been able to regard four characteristic expressions of spontaneity as relatively independent forms of a general *s* factor. We have analyzed these forms of spontaneity in the following manner: a) the spontaneity which goes into the activation of cultural conserves and social stereotypes; b) the spontaneity which goes into creating new organisms, new forms of art, and new patterns of environment; c) the spontaneity which goes into the formation of free expressions of personality; and d) the spontaneity which goes into the formation of adequate responses to novel situations.

*Dramatic quality.* The first form under consideration is that of dramatic quality of response. It is that quality which gives newness and vivacity to feelings, actions, and verbal utterances which are nothing but repetitions of what an individual has experienced a thousand times before—that is, they do not contain anything new, original, or creative. The life of a man may be, thus, in his expressions and social manifestations entirely uneventful but may be considered by his contemporaries and his friends



as unique because of the flavor he is able to add to the most inconspicuous daily acts, for instance, to walking, eating, listening, chatting, and love-making. If we could empty his mind and examine its contents, we would discover stereotypes or repetitions. In contrast to him, another individual might be his psychological double and externalize the same behavior but in want of this quality, he appears dull and monotonous, undramatic and lifeless. The first man is, of course, an idealized individual but the phenomenon described is a powerful agent and may occur to any man for short intervals. It operates in certain life periods, such as childhood and adolescence, with greater frequency. This form of *s* has apparently a great practical importance in *energizing* and *unifying* the self, in that the individual is able to link conserved and closed units of experience with the self. It makes disassociated automaton-like acts be felt and look like true self-expression. It acts like a cosmetic for the psyche. It makes individuals look more youthful and more intelligent than they are, but it does not make them biologically younger, and it does not change their intelligence significantly. It changes the atmosphere of their psychological appearance. They are more vivacious, vigorous, and infectious with it than without.\*

The same phenomenon can be observed in the productions of the legitimate actor. He takes a role, learns and rehearses it until it has become a complete conserve, a stereotype at his command, so that when he reproduces the role on the stage, no utterance or gesture is left to chance. But the great actor, like the idealized man above, is able to inflate and warm up this conserve to an exalted expression by means of this *s* factor, that is, to add a newness, vivacity, and dramatic quality to the faithful literal rendering of the playwright's script, which makes his performance appear undiluted even after repeating the same performance a thousand times—thus, drama conserves can be linked to the self giving them the character

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\*The Lord's prayer, spoken at each meal, may have been spoken for the hundredth time by an individual. The words and the sequence may remain unchanged. It may give the external picture of an old response to the situation encountering him, but the intensity of feeling, the timing, and his action as he speaks a prayer may differentiate it from his own previous renderings and from the manner of praying of other individuals. The *s* factor becomes manifest here, although it may not seem necessary to be spontaneous when praying. There is no threat to the life of the individual, but there may be one to his *status*. One could argue that the effect of the prayer upon the participants might be equally great if he would render an absolute repetition of it each time. But the more the prayer becomes automatic, the more the loss of *s* (spontaneity) will deteriorate one's faith in the value of prayer. On the other hand, continued exercise in spontaneity in praying will give the prayer evergrowing religious reality and dignity.

of true self-expression and to the actor's illusion of a great creator. The accent which the actor gives to inconspicuous events by mannerisms of speech and movement makes them look extraordinary. He himself looks at times supernatural or unnatural. If he would permit himself to act the way he does on the stage in real life, he would be called a madman. It is significant that the Greek word for the chief actor in the drama is *protagonist*, i.e., the man in a frenzy or madman. The Greeks felt intuitively that the actor who acts like a madman on the stage and the tormented individual who becomes a madman in life are of the same psychic "stuff."

*Creativity.* The next form under consideration is that of creativity. The extreme opposite of a man who is a genius at dramatizing the self but totally unproductive is the man who is totally productive and creative although perhaps undramatic and insignificant as an individual. If we would empty his mind we would find it in a permanent status nascendi, full of creative seeds always in the temper of breaking up existing conserves and germinating new forms, new ideas, and new inventions. He is perpetually endeavoring to produce novel experiences within himself in order that they may change the world around him and so fill it with novel situations. These, in turn, challenge him to further novel experiences which again strive to reshape the world around. Thus he is engaged in a breathless cycle of creativity. This is an idealized case, but the genius of our culture has some of this capacity always within him. This function is not satisfied expressing only the self; it is eager to *create* the self. Three versions have been differentiated: a) the spontaneity which goes into the birth, and rearing of a new child;\* b) the spontaneity which goes into the creation of new works of art, of new social and technological inventions; and c) the spontaneity which goes into the creation of new social environments. A highly spontaneous individual will do the most with what he has at his command in resources, such as intelligence, memory, or skills, and may surpass by far an individual who is superior in these resources, but who does the least with them. Spontaneity can enter the creatively endowed individual and evoke a response. There were many more Michaelangelos born than the one who painted the great paintings, many more Beethovens born than the one who wrote the great symphonies, and many more Christs born than the one who became the Jesus of Nazareth.

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\*See "Spontaneity Theory of Child Development," *Psychodrama Monographs*, No. 8, Beacon House, N. Y.; also see "Psychodramatic Treatment of Performance Neurosis," *Psychodrama Monographs*, No. 2, Beacon House, N. Y.



What they have in common are the creative ideas, motivation, intelligence, skill and education. What separates them is the spontaneity which, in the successful cases, enables the carrier to take full command of the resources whereas the failures are at a loss with all their treasures; they suffer from deficiencies in their warming-up process.

*Originality.* The third form of spontaneity is that of originality. It is that free flow of expression which upon analysis does not reveal any contribution significant enough to call it creativity, but which at the same time, in its form of production, is a unique expansion or variation from the cultural conserve as a model. This is often illustrated in the spontaneous drawings of children and the poetry of adolescents who add something to the original form without changing its essence.

*Adequacy of response.* The fourth consideration is that of appropriateness. A man can be creative, original, or dramatic, but not always have spontaneously an appropriate response to new situations. If he would have only stereotyped responses available, however much dramatized and alarming, he would fall within the domain of the first form. If he would be full of ideas and try to create new situations, he would fall into the domain of the second. In both cases, the required appropriate response, that is, appropriate to the situation facing the individual, would not be available and ready. In one case, there may be too little; in the other case, there may be too much. There are three possible responses an individual may show in a novel situation confronting him:

a) *No response in a situation.* This means that no s factor is in evidence. The individual may have given up the old response without producing a new one. He may have kept the old response constant or altered it so insignificantly that he appears at a loss when faced with a new situation. Either he doesn't pay attention to the new situation confronting him, or he is unable to do so because of lack of ability to recognize it. No response may, however, have dire consequences for the individual. The new situation might threaten his existence or destroy some of the values he cherishes. The deeper his wish to produce some s response is linked with inability to produce it, the greater is the calamity.

b) *An old response to a new situation.* An illustration is the robot plane. It was a new situation, confronting the British chief of staff of the armed forces in 1944. To respond to it in the same fashion as to man-piloted airplane, would have been unsatisfactory. A new response had to be initiated—a response for which there was no precedent—it is here where the s factor comes into being, in the inventiveness of engineers and in the organization of their ideas.

c) *New response to a new situation.* As explained above, an old response is void of *s*. A new response cannot be produced without *s*, although other factors must participate, such as intelligence, memory, etc. We must note here the difference between adequate and appropriate *s*, on the one hand, and erratic and inappropriate *s*, on the other hand. A response may be new but far afield from the requirements of the situation. But it is the adequate appropriate response which matters when a man is attacked by a burglar, when a fire breaks out, or a weapon has to be suddenly grabbed to defend one's self against a sudden enemy attack.

Thus the response to a novel situation requires a sense of timing, an imagination for appropriateness, an originality of self-propelling in emergencies, for which a special *s* function must be made responsible. It is a *plastic adaptation skill*, a mobility and flexibility of the self, which is *indispensable to a rapidly growing organism in a rapidly changing environment*.

### III. SPONTANEITY AND MEASUREMENT

The practical importance of adequate responses to novel situations, in the selection and rehabilitation of industrial and military personnel, in the training and retraining of leadership, has caused us to center our attention upon procedures which are able to explore and measure them.

*Test procedure.* The following test contains a series of emergencies in which appropriateness, a form of spontaneity, is bound to operate. From more than three hundred individuals tested, a few individuals are selected here for illustration. They have nearly the same sociometric status, as measured by sociometric tests. Their intelligence quotients range from 75 to 130.

All objects which are necessary for the test are *actually* present in the situation. For instance a telephone, water, book, radio, broom, exit, etc., and the spacial arrangements are realistically animated as much as possible. Distances in space and the directions in space are impressed upon the subject. In other words, the whole setting is an experimental *realization* of probable reality contexts.

*Put a subject into a life situation and see how he acts.* The instructions are given by the director when the scene begins, but piecemeal—not *in toto*. Only such instruction is given to the subject as required for the moment. It is a premise of the test that the subjects accept instructions from the director as a *statement of fact* and as an event taking place. It means that if the director says that "a burglar has entered the house," the burglar *is* there, and the subject has to respond to the situation in an appropriate manner. In other words, there are two types

of events taking place on the stage—actual events (he sees, touches, and moves a desk, a telephone, or a broom; he encounters auxiliary egos in specific roles) and *ordered* events (fire has not broken out but he has to act as if it would be true). The subjects throw themselves into action and the degree of their adequacy of response is scored by a jury. They are tested singly or in groups of eight or ten, all facing the same task-situation of varying and growing levels of difficulty. It is a race with hurdles. If a subject fails to meet an emergency adequately he is "counted out." Another premise is that the director is not in the situation with the subject but outside of it. He is like a prompter, a narrator, a commentator, an announcer of events. The audience consists of a jury of three, two recorders, and auxiliary egos. The situation consists of events which require a series of emerging responses as follows:

#### DIRECTOR

*Preliminary situation:* The director warms up the subject by setting the scene:

"You are in a house, near a main street of a small town."

"You are in the living room; alongside the right wall is a desk. Shelves filled with books are on both sides of the desk. On top of the shelf is a telephone. Alongside the left wall is a couch and a radio."

"Follow me, as I will show you the layout of the house. This door leads to the dining room. Next to the dining room is the kitchen. From the dining room a door leads into a children's bedroom."

"Let us return to the living room."

They return.

"See the desk. It needs dusting."

#### SUBJECT

The subject warms up himself by repeating the director's instructions and gestures, and adding some details of his own.

Subject goes ahead and dusts the desk, cleans the floor, arranges books, etc.

"Look at the floor. It is dirty. Go ahead and clean it. The broom is in the kitchen."

## DIRECTION

1. *First emergency*

Suddenly the director interrupts:

"Fire has broken out in the dining room on the step next to the room where the two babies are asleep."

"You cannot see the fire, because the door is closed between the living room and the dining room. Don't you smell the smoke from the fire?"

## RESPONSES

a) He does not accept the situation, and therefore does not react to it, even though he may be able to do so.

b) She carries on well, cleaning the house, putting it in order, but as soon as she hears that the house is on fire, she laughs and stops. She explains she can do everything which she can perceive or handle, that is, she sees the telephone and uses the cleaner, but she can not visualize the fire.

c) Enters the situation by beginning to clean the room calmly, but as soon as she hears the house is on fire, runs out of the house as she says: "to save my life."

d) He opens the door, walks to the fire and examines it, runs into the kitchen, brings a bucket full of water, tries to extinguish the fire with it.

e) He examines the fire; runs to save children, tries to put it out, calls Fire Department.

f) She does not think of the children until all other procedures have been carried out—throwing water on the fire, telephoning Fire Department, etc. Goes to the room where the babies are, looks at them, says: "They're o. k. Sound asleep." Leaves them there. Comes out and says: "I still smell smoke." She stands there without doing anything further.

g) He examines the fire; calls Fire Department, and then runs to save children; comes back to try to extinguish fire with bucket of water taken from the kitchen.

h) She starts to wash the kitchen floor, but as soon as she hears the house is on fire, runs into the room where the babies are sleeping, takes them into her arms, runs out of the house, brings them to safety, returns to the house, rushes to the book shelf and picks up a package and jumps out of the house again, exclaiming: "It contains the letters from the man I love. As to the house I do not care whether or not it burns down."

i) She tries to do several things at one time—save the children, call up the Fire Department, and extinguish the fire herself. She is over-heated. As a result, she places one of the babies near the fire, the other one on the floor. She steps on the one on the floor when she runs to the telephone, and when she fills the bucket with water, instead of going to the kitchen sink, she goes to the dining room.

j) She verbalizes most of her responses before she actually puts them into action. After she goes to the steps to examine the fire, she says: "What shall I do?" She walks up and down wringing her hands, saying: "Dear me, I smell smoke, hope that's not a bad fire. How did it start? It's coming this way. Oh, dear!! the step to the room of the children is on fire. Have to phone Fire Department." Stands looking at fire. Does nothing.

"This is terrible; fire is spreading—what shall I do? I'll call the fire engine office." Goes to telephone and says: "Give me the fire engine, please, there is a fire here." Walks back to step and says: "I'd better start to put water on anyway." Throws water on. Says anxiously again: "Too bad

Director notices the subject who takes the fire lightly. Immediately, he issues a new order:

"The fire doesn't stop."

"The smoke is spreading inside the wall. The curtain on the wall is in danger of

burning. It is smouldering between the partitions. It is difficult to control without help."

He repeats this statement to other subjects, if necessary.

### 2. *Second emergency*

The subject begins to relax, thinking the danger is over. Then the director announces a new emergency:

"Your mother is calling and entering the basement directly under the smouldering step. *There is danger there.* Think of your priceless jewels in the room next to the children, your manuscript, a record of years of research, your moving picture camera, fur coat, wife's jewelry."

### 3. *Third emergency*

(The subject turns, just planning to go to the room where the children are sleeping.) Director orders a change of scene:

"Your father is outside crying for help. It is a weak and desperate cry. He sounds ill. You know he suffers from heart trouble."

"The wall is starting to smoke, but there is still time to go safely after the jewels."

I can't get in to get the children. I'm afraid to go through the fire."

k) He rushes to get the children, brings them outside to safety, rushes back to extinguish the fire; runs out of house, returns to say that he has put in an alarm at the corner fire alarm box. He explains: "That's the safest thing to do."

a) He immediately opens cellar door and shouts: "Get out, mother. Go around the other way. The house is on fire here." Goes outside to get the garden hose.

b) He ignores his mother and goes for his treasures.

c) He tries again to extinguish the fire by other means after warning the mother and ignores valuables in the room near the children.

a) He goes outside and works over his father.

b) He ignores father, continues to go for jewels.

c) He asks someone to call a Doctor, or he calls one himself.



#### 4. *Fourth emergency*

Director orders a change of scene:

"The mother of the children is entering the house."

Mother (auxiliary ego) enters and faints. Director continues:

"You hear the voice of an older (third) sibling approaching the dangerous cellar stairs running after his mother. It is still safe to go after the jewels if you go immediately."

#### 5. *Fifth emergency*

(The subject has the jewels and manuscript in his hands, and is ready to leave the house.)

Director stays him by ordering a change of scene:

"The section by the room you are in is entirely in a cloud of smoke. In order to get out of the room you must smash the window and jump 12 feet to the ground, or take a chance and go through the smoke."

As the situation develops and as the subject is able to solve one emergency with which he is faced and move into the next, he is challenged by more and more emergencies and alternatives to which he has to make new

a) He leans over the mother to revive her. Ushers child out of the house; orders a bystander or one of the firemen (who have already arrived) to stay with the child.

b) He ignores both child and mother and runs for valuables.

c) He ignores the mother. Says: "She will be all right. She is just frightened." He continues to put out fire. Forgets child and runs after jewels.

d) She calls a Doctor for the mother. Then goes after the jewels.

e) She calls the Doctor and then tries to revive her. Like a flash it goes through her mind that it is not she who is the mother of the children, but the woman here who has fainted. She runs out again to see if the children are safe and takes them to the neighbors.

a) He goes out through the smoke.

b) He smashes the window and calls for help.

c) He smashes the window, crawls out and jumps.

d) He smashes the window, crawls out and jumps, helps firemen extinguish the fire; after it is all over, becomes excited and cries on the stage.



adjustments continuously and in which he has to make new decisions. It is obvious that if a series of alternatives are given to *one* subject, they have to be given also to the other subjects. Thus the test is so constructed that the subject is challenged by more and more possible alternative actions, the more emergencies he has been able to solve in the previous stages of situations. His spontaneity, so to speak, is increasingly challenged the longer he goes on with the test.

*Frames of reference for the systematic analysis of responses.* Timing of a response to an emerging situation appeared to be a major factor in appropriateness. The minimum and maximum range of *permissible* duration of each single warming-up process to an act and to the total situation had to be established. Observation of individuals in real situations, near replicas of the situations tested, provided us with a diagram of permissible durations. A positive score was given to a subject if he operated within the time range; a negative score was given if the duration of a specific act was below the minimum or beyond the maximum. If the warming-up process to the idea that the babies are in danger is too slow, the emergent action—carrying them to safety—may come too late. On the other hand, if the warming-up process is too fast, each act can not be fully executed, and the result will be a jumbled series of incoherent acts.

A space diagram was established on the basis of observations made in real situations of the positions taken by individuals and the movements made by them towards changing goals. The space diagram plotted the house and its surroundings, the position of a subject at the start of the test, the positions of every other subject entering the situation, the localities of every object required in the test, and the shortest routes to the objectives, kitchen sink, babies' room, neighbors, etc. A range of permissible detours from the shortest route was established for each act. A positive score was given a subject if his movements fell within the permissible range, a negative score, if the waste of movement was bound to defeat the purpose of the action.

The great variety of responses required a frame of reference determining which actions were more appropriate at a given moment, within the framework of the value systems dominating our culture. Appropriate response is in itself a fragment of the role fitting a situation. In the situations tested, three roles were in conflict, the rescuer, the mother-daughter, and the property owner. Three values were in conflict: life is at stake (of children); status is at stake (a mother "has" to save her children and parents); property is at stake (house, money, books). It seemed least permissible to save one's life and to run away, next to least permissible, to

save some property; the highest order seemed to be a rescuer (saving the life of any one), and the next to the highest, the role of the parent (saving life because of kinship). Within a framework of permissible roles, alternatives of appropriate responses within each role were arranged. Although several subjects were moved by the same aim—to save the children first, without delay—their actions differed in appropriateness. One took them out of the house to neighbors; the other moved them into the next room, still within the danger zone; the third tried to jump out of the window with both babies in his arms, an unnecessary risk.

When dealing with the higher levels of spontaneous appropriateness, the *endurance* of a subject in taking on new emergencies and meeting them adequately is of great significance. In this test, a group of subjects never passed through the first emergency, because they ran out of it, to save their lives or to call for help. Another group of subjects, because they had met the first emergency more or less adequately, reached the second emergency situation, that of his mother and the mother of the children entering the burning house. Here their spontaneous resourcefulness came to an end; "they lost their heads" by permitting the frantic mother to enter the babies' room or by running to call the Fire Department too late.

Another group of subjects reached, without any difficulty, the third emergency level; a still smaller number, the fourth level; and a few, the fifth level. It became clearer as emergencies piled up that the number of emergencies through which a subject can pass was an indicator for the range of his spontaneity. The point of decline and loss of spontaneity announced itself by an insidious onset—inadequate role perception, poor timing, and waste of motion.

#### CONCLUSIONS

A *total* application of so-called laws of nature to the biological phenomena within our universe is impossible in terms of spontaneity theory. Some factor which we call spontaneity, as it has contributed to their formation, can contribute also to their reorganization, and must operate to some degree independently from them. Spontaneity, therefore, must be considered the most important vitalizer of living structure.

I. In the course of studying spontaneity of individuals, it is helpful to gather data under four headings: the dramatic, the original, the creative, and the adequate response. This does not mean to imply that any of these functions are ever encountered in a pure form, but that there is a predominance of one over the other in certain responses, which suggested their dif-

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ferentiation. An excess of the dramatic function may permit sterile cultural conserves and social stereotypes to live on, prosper, and block the rise of original and creative efforts. On the other hand, an excess of the creative function may appear in certain individuals and groups before the environment is established in which the ideas and inventions are a fitting response.

II. Spontaneity as a dramatic function energizes and unites the self. Spontaneity as a plastic function evokes adequate responses of the self to novel situations. Spontaneity as a creative function endeavors to create the self and an adequate environment for it. However, when the functions of spontaneity are left undirected, contradicting tendencies develop within its own functions which bring about a disunity of the self and a dismemberment of the cultural environment. By means of spontaneity tests and spontaneity training,\* the gradual merging and coordination of all functions can be facilitated.

III. *Put a subject into a life situation and see how he acts.* The subjects throw themselves into action and the degree of their adequacy of response is scored by a jury. They are tested singly or in groups of eight or ten, all facing the same task-situation of varying and growing levels of difficulty. It is a race with hurdles. If a subject fails to meet an emergency adequately he is "counted out."

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\*Spontaneity training seems to be a contradiction of terms. How can spontaneity be trained? It consists of two phases: the liberation of the individual organism from clichés, that is, deconserving it, and making it free for the reception of s. In the second phase, the increased receptivity and readiness of the individual organism facilitates new dimensions of personality development.

## PSYCHODRAMA AS EXPRESSIVE AND PROJECTIVE\* TECHNIQUE

JOHN DEL TORTO AND PAUL CORNYETZ  
*Psychodramatic Institute, New York, N. Y.*

### INTRODUCTION

For the past year we have been engaged in exploring and organizing psychodrama as an instrument for stimulating expression and projection. These preliminary studies have indicated that psychodrama is a climax of methodological development in this field. This article is a report on the present phase of the experimentation. Subsequent articles will relate further progress; and developments of this investigation will deal with the already considered problem of validation. Our approach has been not to standardize and kill the basic methodological freedom of spontaneous psychodrama, but to submit its *organic* process to rigorous inspection and operational analysis.

In the planning and executing of this research, we have been aware of certain salient developments of projective methods for personality diagnosis. Broadly speaking, there are two basic problems. One of these is that the test procedure should stimulate the subject to the fullest possible projection and expression. Secondly, it is necessary to establish verifiable points of coordination with biographical data. This is, of course, the problem of validation.

Psychodrama intensifies and vitalizes case history material as no interview can do, and releases areas of information that are not liberated by other projective techniques which do not have the stimulus of action and the subjects, in a sense, living the roles they give in verbal reports. In this way, it offers a meeting ground for the experimental and the clinical approaches by getting close to the actual life-history of the subject. Rapaport (21) has said: "Life history is a projective reflection." In psychodrama, life history is a projective *realization* in activity.

If one of the primary hypotheses of projective techniques is true, namely that behavior manifestations significantly reveal and express personality, then it might not do to limit—and thereby distort by overemphasis on single factors—the natural expression of the person as he is in life. Most projective methods so far devised, by the very nature of their construction,

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\*The authors are aware that the projective aspect is only *one* fragment within the structure of psychodramatic methodology.

peel away certain aspects of total behavior and analyze that separately. Some require a complicated theoretical system to *infer* back to the whole behavioral complex and encounter many difficulties in theory and in validation. Further, obstacles are not interpolated as they are in real life. We believe no projection has diagnostic meaning unless related to its interpersonal matrix. Psychodrama provides the social setting and stimulation, which human beings must eventually face in giving even their most private phantasies diagnostic significance.

We find that action, reaction, social interaction, and role manifestation of motives get at intimate personality data. Spontaneous involvement always brings forth characteristic material. Confabulation itself would indicate *limits* of possible personality expansiveness and versatility. The *flexibility*, *s* factor (16) of a person could be measured. This would give us a more comprehensive measurement of personality than any other projective test, indeed of any other personality test.

#### METHODOLOGICAL DISCUSSION

From a methodological orientation, free association is a primitive procedure for gathering data. The subject is isolated, no controls are introduced, and no experimental framework is established. There is no recognized standard attempt of the analyst to stimulate production. The analyst will, of course, have analytic resources, but the methodology does not include methods for stimulation. There is no technique to test the flow for intensity of real life validity. Indeed, it seems paradoxical to bring a subject into a darkened study with a couch, to encourage him to be relaxed, placid, and inert, and then expect him to give a projection of how he behaves in life, where his interests are involved and there is continual interplay of motives. Projection should be full, varied, intense. The psychoanalyst places the individual in an artificial situation for expression, a very elaborate machinery of symbolisms and latent meanings is required to infer back to his actual behavior. The system of symbolisms fragments the personality into neurotic trends which are traceable in an *abstract* history of the mechanisms of the person back to traumatic situations which have broken the personality into "conflicting" areas. Psychodramatic theory does not consider it possible to analyze the individual separated from the social matrix in which he lives; therefore its very *methodology of analysis* includes seeing the subject in a whirl of interpersonal contacts. Psychoanalysis, we believe mistakenly, studies the person in isolation.

Free association is primarily a tool for investigating the dream and,



therefore, we must associate the study of the dream with it as a primitive projection method. Experimental studies of dreams have been made, of course. Maury (17) is credited with the first study, in which he sought the influence of certain stimulations, such as perfumes, upon dream production. Klein D. B. (1930) (8) used a wider variety of stimuli. The residues of pictures shown to the subject prior to sleep were studied by Malamud and Linder (13). Other aspects have been investigated, but none of this research obviates the need for a complicated and ambiguous theory to infer back to actual behavior.

In word association, as suggested by Galton (6) and Kraepelin and as organized and developed by Jung and his associates we have a slight methodological advance in the development of projection method. A standard for interpersonal comparison and differentiation is afforded by organizing the starting points of the free associations. However, the nature of the stimulation is still solely verbal, conceptual. Here we have free association plus an element of control. The subject is instructed to reply to special "complex" laden words, with the opposites of the stimulus words. Or a theme is chosen or the number of responses may be limited. White (25) has reported a number of complicated laboratory tests which were developed to validate the efficacy of word association as a "complex-indicator." Kent and Rosanoff (10) (1910) used this method purportedly to distinguish the sane from the insane by the criterion of the ratio of common to uncommon responses, which were statistically determined. Luria's (12) "combined motor method" (1932) ingeniously discloses in graphic form patterns of organization and disorganization in the central nervous processes attending the stress caused by critical words. But, beyond the initial selection of word stimuli, the word association method is similar to free association, and lacks all other possible controls and checks.

With Binet (1895) and Whipple (1910), we have the introduction of a *visual stimulus* to provoke and encourage the flow of imagination. Binet suggested the ink-blot and Whipple experimented with its use. On this methodological level, we mention Stern's (24) cloud pictures (1937), amorphous, non-symmetric forms used to encourage phantasy production. In the Rosenzweig "balloon pictures", the visual stimulus is organized into a pictorial representation. The subject responds by filling in the empty cartoon balloons. With the development of the Thematic Apperception Test by Morgan and Murray (15) (1935), we have the most elaborate organization and control of the pictorial stimulation method yet developed. In the TAT, the subject is presented with, and asked to write a story about, each of a

series of pictures. Through the process of his choosing a figure with which to identify and by his organization of this person's strivings and obstacles, themes are revealed which indicate the subject's basic needs and those presses which are important in his life. The TAT is being used to experimentally verify psychoanalytic theory, the story produced being equated to the night dreams of Freud. Thus, we see that the TAT is merely the culmination of the verbal method in projective technique. As a method, it is intended to assess the *imaginal content* and unconscious dynamisms of expression. Masserman and Balkan (14) (1939) used the TAT pictures, but varied the method of handling the data in clinical studies. By evaluating syntactical and grammatical aspects of the language responses, they arrived at certain ratio indices used to differentiate three clinical types.

The Rorschach (20) technique also uses a visual stimulus, but its treatment of the data is unique. The emphasis on content is minor and only in this does it follow the free association development. Its major methodological contribution is the emphasis upon *methods of perception*, how the person perceives the ink-blot. The Rorschach attempts to construct a blueprint of personality structure by defining the perceptual organization used in the subject's structuring process. The basic concepts of "erlebnistypus" and "erfassungstypus" are derived from data indicating how the subject experiences and organizes the perceptions of the ink-blot. The intellectual competences of the individual is a function of the "form-level" of his perception and the ability to handle large, organized areas of the blot. The emotional life, its depth and intensity, is a function of his handling of the color areas in the card. Thus, we see that the Rorschach method can be classified in that group of projective techniques which uses the visual stimulus but minimizes imaginal content and concentrates on the *manner* of perception and apperception.

As a further methodological development, projective techniques began to study the subject's *plastic involvement*. The BRL sorting test and Hanfmann-Kasanin (7) concept formation test attempt to assess abstract thinking ability on the basis of choice, differentiation, and organization of plastic material. In the methods of finger painting and clay modelling, the process and activity in handling the materials is included as data. Finger painting, developed by Ruth Faison Shaw (22) and by Joan Fleming (5), is a variety of play technique, a form of creative expression in the medium of colored pastes soluble in water and manipulated on paper by the hand. The paintings may be used as the starting-point for therapeutic interviews with associations and analysis to give the patient insight into his unconscious moti-



ventions. Finger painting and clay modelling, as projective methods, directly use *plastic involvement* of the subject. In this approach, there is a rudimentary engagement of the motoric aspects of personality. The movements of hands are studied in terms of inhibitions, use of area framing, emphasis, and the direction. The analytical possibilities of the study of plastic involvement are intensified by Erikson's (4) approach to play analysis and the Bühler World Test. Variables such as extension in actual space have been the object of study by Erikson. He has children construct dramatic scenes with toys and observes through a one-way screen, analyzing disruption, formal or spatial characteristics. H. A. Murray's (19) Dramatic Productions Test uses a toy situation for analysis of adults. In these projective methods, the subject's phantasy-involvement with the task is interpreted together with his plastic handling and organization of the object.

Play analysis, as used by Klein, A. Freud, and Isaacs, places the subject studied in a play situation. However, the evaluation of the data emphasizes the imaginal content produced during play, and is used primarily as a substitute for free association and not a method based on *social interaction*. The work of Melanie Klein (9) has followed closely general analytic technique with adults except that it has adapted itself to the needs of children and uses the childrens' play as an expression of the unconscious in place of verbal associations.

In the Bender and Woltmann (3) (1936) puppet shows, a drama is presented to an audience of children who may be invited to discuss and determine the end of the play. On the basis of this participation of the children by prediction, the method has been compared to psychodrama by White (7). Audience discussion is a small, though important, part of psychodrama and the technique used by Bender and Woltmann is modeled after one of Moreno's psychodramatic techniques: the "projection technique."

Play analysis is a systematic observation of spontaneous everyday behavior of the child and is supplemented by incidental observations, letters, school records, etc. It is not an experimental method, since it does not control and vary the factors under observation. Psychodrama is not a play technique in which "adult reality constraints are laid aside," but is *an experimental method of interpolating varying resistances and constraints*.

Spontaneous methods were being used as early as 1919 by Dr. J. L. Moreno in Vienna. In *Das Stegreiftheater* (16) 1923), a statement of use of spontaneous methods in creativity, diagnosis of personality, therapy and prophylaxis was made. As a diagnostic tool, Moreno's (16) psychodrama employs the following techniques: "Substitute Role," "Mirror," "Rever-

sal," "Projection," "Symbolic Distance," "The Double Ego," "The Auxiliary World." These and other techniques have been defined very carefully elsewhere. (16) Spontaneous psychodramatic discoveries are being patiently refined, and we now offer a preliminary experimental form of standardization.

#### AREAS OF CONTACT WITH THE SUBJECT

Our discussion of projective techniques indicates four major areas in the gathering of data: 1) imaginal content (free association, word association, and Thematic Apperception Test); 2) methods of perception (Rorschach); 3) plastic involvement and organization (finger painting, Bühler World Test); and 4) social interaction (psychodrama). The history of projective methods is the progressive engagement of more and more of the individual resources for expression. We shall indicate how psychodrama can be used to contact all these four areas, making it the most varied and intensive projection method yet developed.

The spontaneous methods of psychodrama activate the concealed processes of personality in the most complete manner. Psychodramatic action on the stage may be compared to organ music in a cathedral. As the congregation (in a Bach chorale) sings a stereotyped, conserved, and simplified chorus, the organist may improvise spontaneous counterpoints, weaving them around the conventional chorus. With the playing of the deep, low notes of the bass, there is the trembling columns of air, and echoes and vibrations are heard and felt in the deep corners of the arches. Under the stimulus and liberation of his own action, the counterpoint and conflict of his own motives, the more intimate aspects of his personality begin to "vibrate" in expressive movements and the personal melodies of his ideas and moods.

For purposes of illustration, we have analyzed psychodramatic procedure into fictional stages indicating how judges may gather data in terms of phantasy, perception, plastic involvement, and social interaction. This outline can be used as an analytical frame of reference for the evaluation of stenographic reports. On the basis of this Data-Guide, the spontaneous method may be organized in a form available to many workers as a research instrument. We offer this as a common reference to afford a standard of comparison for the independently gathered material of other workers in the field. As research proceeds, new and subtler areas of contact may be discovered.

### 1. *Imaginal Content*

#### a.—*The definition of surroundings in the warming-up process; choice of objects.*

At the beginning of the psychodramatic session, the subject is encouraged to fantasy a material matrix in which his projection is to be born and lived. As he develops the material life-space around him, we begin to envision the objects which have value and significance in his world. "The value world of a given organism is the world of objects to which it is fixated." . . . Further: "A large number of our social motives are channelized drives, different objects having been fixated in this way in different cultures and in different families in a given cultural area." (G. Murphy, 18). Of special importance in the case of these objects in the social world which become the focus of the person's needs is the concept of *tele*. (16) In this phase, we seek the person's tele relations to objects. In the spontaneous process, the person naturally describes those objects which are most familiar to him, and which are close to the satisfaction of his needs. In this way, much of his cultural atom (16) is disclosed.

We must also be alert to non-literal use of objects in symbolic role patternings.

#### b.—*Definition of his own role by his participation.*

What persona is created? In his attitude of approaching objects and other persons, he establishes a relationship to them. He may assume the role of a bully or a saint. He may identify himself as a son, a brother, a father. Each of these roles has its collective designation. We are interested in how he particularizes the role to *the* son, etc. This will be revealed in the kind of correspondence he sets up. Does he use verbal or physical methods to establish his role? If he uses both, are they consistent with each other? One may try to play the role of a bully, for example, with posturings and gestures that are essential tenuous and timid. As he defines and *develops* his role, what is his range of expansiveness within it? What are the central characteristics that identify the role for him in the flow of action on the stage? Is he aware of, and does he exploit, these characteristics? Is he spontaneously aware, flexible and adaptive to the situation; or is he conserved in a rigid portrayal of his chosen role?

Werner Wolff's (26) studies in "experimental depth" psychology corroborate Moreno's clinical demonstrations that symbolic roles and "deep-level" roles are revealed in expressive behavior. We have found these suggestions very fruitful in psychodramatic process (Mute Situation).

c.—*Definition of the roles of others.*

The subject will need people for the completion of his phantasy. Who are they in his world? How do they shape themselves into his social atom? Is there a continuity from situation to situation of a person within his social atom? (16) If a hierarchy of roles (executive, foreman, and worker) is indicated, where does he place himself in it? The auxiliary ego will shape his role from the cues and attitudes physically and verbally suggested by the subject. Does the subject indicate by his spontaneous interests and needs that he desires to work with a dominant or a submissive person? Does he change and control the roles of others or let them develop in a kind of autonomy? (Cf. the extreme of control in the "Projection Technique" of Moreno (16), in which the subject momentarily assumes directorship.)

Every role matrix (16) in which an individual operates has an organic growth. At any moment, a genetic indication of the social atom of a person may be seen. Each field of roles has a birth, a maturity, and a senescence. Certain parts of the social atom will be born, others living, and yet others will be vestigial. Thus, in a projection, the subject may speak of Alumni acquaintances and show by his manner that they no longer have living significance for him; whereas, a lover may be at the pivot of his social atom, exciting and arousing his momentary needs and interests. He may project a "future" situation, in which curious and explorative behavior may indicate the birth of a new role.

d.—*Introduction of Ideas and Their Development*

Every role and situation is the vehicle of ideas. It would be relevant to know the sources of ideas and experienced content as the subject projects them. Morgan and Murray made a study of the sources of the stories they collected in the TAT, and discovered four main sources: a) books and movies, b) objective and subjective personal experiences, c) events in which a friend participated, and d) conscious and unconscious phantasy. In our own experience, we have found that subjects spontaneously involve elements of their cultural and social atom content, affording much biographical data.

In the procession of ideas are there symbolic roles concealed? Do the ideas have a controlled continuity? What is the "semantic distance" of the ideas to the subject? Which of the ideas are intimate, which can he handle with nonchalance, and which repel him? In what esteem does he hold various ideas? Which of the introduced ideas does he reject, which please him and are extended? *How* does he reject or accept?

Are there any coherent themes running through a situation or situa-

tions? We define a theme as a functional interrelationship of ideas. What pattern do they form? Through his persistence, qualifications, anxieties, or confident handling of his own ideas, the theme may be brought into focus. Is it, for example, a struggle to realize his creative ego? Is the theme obsessive or relaxed; are there variations? Is he limited or does he realize a number of themes? How do the themes of consecutive situations connect?

## 2. *Methods of Perception*

### a.—*Descriptions during the warming-up process*

We have already shown how data may be gotten from the warming-up process in regard to the *content* of projection. From another point of view, the same dynamic process provides data as to *how* the person perceives. Is the literal indication sufficient for the subject or is he interested in colors, textures, and shadings? We are interested in his elaborations and descriptions of particular objects and persons; the richness or poverty of his perception. By which detail of description does he identify and define his surroundings? With what refinement and sharpness of vision does the subject describe his surroundings? Does he see things as static or as moving? Does the subject perceive objects as a whole or does he bury himself in some detail?

The perceptive protocol (as recorded in stenographic notes) may be evaluated according to some highly developed scoring scheme. Since, in psychodrama, each situation is a personally activated process ensuring a personal projection, there would be no necessity for a cultish secrecy (especially in regard to the ink-blot) that Rorschach workers show. Spontaneous reaction obviates the report of already known responses as may be made to a conserved ink-blot. There is no loss, however, of common responses. Moreover, the subject is free to organize his experience in terms of color or texture or three dimensional position; whereas, Rorschach workers recognize *organization* only in terms of form.

### b.—*Perception-in-action.*

Psychodrama is more valid than other tests since, always in real life situations, *perception is an active process influenced by momentary motoric state* and mood. "K. Goldstein has emphasized the point that every experience of the organism is connected with an orientation of the organism toward the place where the experience occurs: the whole body is directed towards the stimulus." (Schilder, 1942) (23). In psychodrama, as in life, the subject moves, perceives, and uses objects at the same time. The Ror-



schach test is itself a situation in life in which the subject is motionless and is asked to make perceptions of a static field.

What in the perception of an object stirs the person to react to it? How does the development of the situation change his perception of the object? How is this change evidenced? Are the actions of the subject appropriate to the perceptive field he has created, or does he move disregarding his object perceptions? How sensitive is the subject to imaginary objects introduced, for example, by an auxiliary ego? Does the subject move through an imaginary life-space of whirling objects, or does he remain rather immobile with a stable imaginary field? This may give a differential indication of "general activity level." As an illustration, the report of one subject is as follows: "Sense of being alone in a vast world of night—heightened consciousness of body—dancing in dark—floating, flashing through space to the stars . . . need for someone else, love, art, activity, motion . . . dancing, talking, changing posture . . ."

This may give a differential indication of general activity level.

Very frequently in life one reacts to subliminal cues which are un verbalized, but consequent activity can overtly show that they were perceived. The Rorschach cannot measure such perception because it remains un verbalized; however, in psychodrama, the operations of behavior may lead to some social definition of the subliminal perception.

### 3. *Plastic involvement and organization.*

#### a.—*Organizing objects, and involvement with "organic plastic field"*

During the warming-up process and during the playing out, the subject organizes objects such as furniture, ornaments, and natural surroundings, in a manner that provides for differential diagnosis. The subject may "strangle" himself with precision of organization. Objects may be rigidly and mechanically machined into a procession or tumble associatively after one another. He may remain aware of his organization of the surroundings and act in accordance with it or he may disregard his own created field. One must distinguish between the compulsive organization of all objects and organization of essential objects, *i.e.*, to organize a few into a functional unit. The manner of treatment of organization of objects reveals which are impersonal and which are charged with emotions and associative value. The subject may totally order, may order just the intimate, or may leave disliked objects in disorder, or feel compelled to organize them out of the possibility of threat. To organize may also be to exclude from living involvement.

At the center of the "organic plastic field" is the individual: controlling,

organizing, directing, choosing, influencing, and being acted upon by the plastic universe of his imagination. We get a sense of continuum of the human being and the plastic field in which he lives. Such a concept is suggested by William James' idea of the "material self" and Erikson's "auto-cosmic toy." In the plastic lifespace, objects are extensions of the ego and of the human body. Some may need to "deaden" the objects around themselves to secure their own mobility; others may wish to live in a "world" of whirling objects. The individual and his surrounding may be considered as a single organism.

In the "plastic organic field" discover which parts are most intimate or aloof. The correspondences that persons establish with their material surroundings is to be studied. What sensory and motor channels does he use for communication with them? There may be differentiating criteria in the manner predominantly used in communication with objects. Is the engagement of the material field primarily functional? Or aesthetic? How close does he come to objects in his utilization or appreciation of them?

b.—*Organization of themes and situations.*

In the sequence of situations, are the themes ordered? Do they have a logical pattern, are they associative, incoherent, or scattered? Is the presentation of themes flexible and adaptive to the situations or is there rigid imposition of a theme upon the situations? There may be some theme development not manifest to the subject. Themes may arise only verbally, or in the consistent manner of dealing with objects. There may be a contrast between the organization of themes and the organization of objects, pointing to a possible conflict.

4. *Social interaction (Interpersonal relations)*

There is no projective method but psychodrama which uses controlled social interaction for gathering data. Thus we see that the psychodrama is a high point in development since it approaches the subject in each of the four major areas outlined.

a.—*Channels of social interaction*

Through which of his expressive resources does the subject communicate with other people? Is he predominantly verbal or does he seek and encourage physical contact? Is reticence, confidence, or dominance revealed in his physical rapport? How is this related to his verbal manner? Does he require intermediaries or can he deal with persons even though deviously? Does he use objects as tools for influencing social relationships? Is there



give-and-take or is he selfish in the use of the channels of communication? How sensitive is he to the cues and communications of others? Is he adaptive to the resources of communication of others?

b.—*Social interaction "types"*

What is the subject's general pattern of interaction with other people? We offer a convenient method for rough grouping of social behavior based upon Moreno's social reaction "types": imitative, sympathetic, demonstrative, and solitaire. The imitative person will allow others the initiative, and will copy. The sympathetic person shares in the interchange of social experience. One who is exhibitionistic, impulsive, and overbearing may be termed demonstrative. The solitaire needs no explanation. Of assistance in making this rough grouping is the pattern of the data on channels of social interaction.

EXPERIMENTALLY CONSTRUCTED SITUATIONS

How much the subject gives of himself depends upon the problems of rapport, confidence, which any psychological tester must meet. The subject should be familiar with the test procedure, and must understand what is expected of him, so that he may cooperate and fully project. These problems are handled in the following manner.

Just prior to the testing proper the subject is engaged in a very short conversational "mutual-interview." The director may find out his name, age, and *casually* seek to discover some of his interests. The director may speak pleasantly and simply about spontaneity principles, creativity, imagination, and role-playing in life, seeking to stimulate the subject's interest. To lessen the strangeness of the psychodramatic world to the subject, so that he may use it to express himself and not be stifled by it, the director may also briefly and simply discuss psychodramatic procedure. This "mutual-interview" should take only a few minutes.

After the subject has been introduced verbally to the psychodrama, he should next be introduced to the experience. We begin with a *preliminary situation* designed to do this. This is a casual situation which the subject is encouraged to define. *It may* be a simple work, school, or pleasant friend situation, giving him confidence and a beginning psychodramatic rapport that is easy for him. We begin to establish the motivation for spontaneous expression. During this situation, we take the subject's suggestions and dramatize them, offering him very little psychodramatic resistance. We may send in an auxiliary ego to casually engage the subject. We may leave him alone

to soliloquize for a moment, or send in an auxiliary ego carrying an imaginary object for the subject. In this way, we familiarize him with psychodramatic materials in action. The entire situation should take no more than a few minutes. From it we get *hints* as to the subject's interests, attitudes, and manner of behavior. It is most free in form, most variable in process, *and* very useful in getting the subject's willingness to participate in the subsequent testing.

Then we introduce the subject to the operationally standardized portion of the test proper. Here we have him go through a series of situations whose operations are pre-planned and objectified, but in which he has latitude for the expression of his personal reaction and content ideas.

### *The Psychodramatic Test*

#### 1. *The Perfect Ego: Imaginary Person Situation.*

Instructions: "You are on the stage with an imaginary person. You shall invent this person and create a relationship with him or her. You identify the person, the time, the place, and the activity. There are no limitations except that you may invent only one person. What you do in the situation is entirely up to you. All right, begin."

a.—Designed to get his personalized and unimpeded projection of what a social relationship means to him; opens up areas of interest for further intensive psychodramatic study.

b.—How does he communicate?

#### 2. *The Object and the Auxiliary Ego Situation.*

Instructions: "You are on the stage with an imaginary object and another person. You are to establish a relationship with the person and the object. I shall name the object for you. What you do in the situation is entirely up to you, but you may not introduce any other objects or persons. The object is (blank). All right, begin."

a.—The influence of social relationships upon how the subject deals with objects. Does he monopolize, share, or surrender the object? (Cooperation and competition).

b.—To study differentials between acting with an imaginary person and with a real person.

#### 3. *The Perfect Ego: Three Objects Situation*<sup>1</sup>

Instructions: "You are on the stage alone with three imaginary ob-

<sup>1</sup>The authors are at present organizing an experimental study of object-canalizations

jects. I shall name these objects for you. You may choose one, two, or three, but you may not introduce any other objects. There are no limitations except that you deal with at least one of the objects. What you do with the objects is entirely up to you. They are (blank), (blank), and (blank). All right, begin."

a.—Which objects does he choose, emphasize, or reject?

b.—Does he have a need to integrate them?

c.—Is his interest in them functional or aesthetic?

#### 4. *Periodic Stimulation Situation*

Instructions: "You are to create a situation on the stage. In this situation you are (director defines his role) and your companion is (the director defines the role of the auxiliary ego, in relation to the subject's role). (The director defines the situation: time and place.) What you do in the situation is entirely up to you. All right, begin." At controlled intervals, the director sends in auxiliary egos who have been instructed as to the type of stimulation they are to offer. Each replaces the previous ego. The basic situation is not changed, each stimulus fits itself to the situation in progress without interrupting the action. For example, the role of the subject is defined as an artist, working in his studio. At controlled intervals, the director sends in an aggressive lover, a landlord demanding rent, and a model waiting to be posed.

a.—Designed to test the subject's range of expansiveness within the role.

b.—To test his spontaneous adaptations to surprise elements.

#### 5. *The Hidden Theme Situation*

Instructions: Given to the subject outside of the room. "When you go on to the stage, a situation will be in progress. You are to enter that situation. What you do in the situation is entirely up to you, but you must relate yourself meaningfully to the situation in progress. All right, begin." While the instructions are being given to the subject outside, a defined situation with two auxiliary egos begins on the stage and is already in full progress when he enters.

a.—How does the subject perceive the theme and situation in progress? How does he create a role in relationship to it? (In all other cases, the situations or roles were defined verbally for the subject. Here, themes and roles are buried in psychodramatic action.)

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and man's relationship to the machine, concentrating on the specialized use of just this situation.

### 6. *The Mute Situation*

Instructions: "You are on the stage with another person. I shall give you a theme to act out. Neither you nor the other person may speak. All your communications are to be in terms of gestures and bodily movements only. The theme is (dash). What you do in the situation is entirely up to you. All right, begin." The auxiliary ego has been instructed.

a.—Designed to reveal physical resources for communication and expression. (Dependency upon verbal methods.)

b.—Area and emphasis factors as an index to personality. (Allport and Vernon, 2).

### 7. *The Reversal of Role Situation*

Instructions: "You are to create a situation on the stage with another person. In this situation, you are (the director defines his role) and the other person is (the director defines a role in relation to that of the subject). (The director defines the situation: time, place, and theme.) What you do in the situation is entirely up to you. All right, begin."

The situation is allowed to develop for a controlled period of time and, at the end of the action, the subject is instructed to immediately change roles with the auxiliary ego and to replay the situation as *exactly* as possible.

a.—How aware is the subject of both the content and the manner of expression of his own role and the role of the auxiliary ego? How sensitive is the subject to others in social situations?

### 8. *The Triple Situation*

Instructions: "You will be in three consecutive situations. Each one will be different. You will go *immediately* from one situation to another without break, except for further instructions. I shall outline each situation for you. You must observe the given instructions, but beyond that there are no limitations. What you do in each situation is entirely up to you."

The director then defines the first situation, and it continues for a controlled time. The action is interrupted and instructions for the next situation are immediately and briefly given.

a.—Designed to test the subject's spontaneous adaptability to such shifts.

b.—What are the conserved portions of behavior: role lag? We define role lag as inappropriate residues of role expression which carry over from one situation to another, a role inertia.

### 9. *The Descriptive Situation*

Instructions: "In this situation, you are alone. You may choose a locale familiar to you in real life or out of your own phantasy. We would like you to describe this locale fully: your surroundings, the objects. But describe it as if you were experiencing and living in it now. What you do in the situation is entirely up to you. All right, begin."

a.—Designed to get a perceptive protocol.

The methodological survey study was made in order to see how other experimenters had been handling certain expression and projection problems, and to incorporate their discoveries into a psychodramatic technique. The validity of psychodrama as a clinical tool has been recognized. However, we are working towards establishing it as an experimental test. In standardization, it is possible to use a *planned operational procedure*, which can be a norm for interpreting the differential responses of subjects. It is necessary to arouse the subject's interest and get him spontaneously motivated to act out his own attitudes and role needs. Therefore, one cannot present a straight-jacketed content of roles and themes. The subject is given those roles in which he has shown an interest. However, we do not allow the subject to become interested in too limited a content, but provide that he be tested in a set of situations broad enough to give a comprehensive view of him in many life situations: as, his work roles, private ego roles, public ego roles, creative roles, social roles, family roles, etc. The problem of extensiveness of role ability concerns us, as well as the expansibility within a role. By standardizing the operational procedure, we construct an experimental set-up; and by encouraging the subject to reveal personal case history material, we retain the clinical approach as well. As we said before, psychodrama offers a meeting ground for these two approaches.

In the construction of our experimental situations, we constantly kept in mind that we were hovering between a clinical and an experimental approach. We tried not to lose the advantages of either. Therefore, in the following situations, we standardize and organize the use of new psychodramatic procedures, but adapted ourselves to the projective needs of the subject within this operational framework. We do this because we wish to know his *operational resources* as well as the content of the world. We give an operational question to the subject and he gives an operational answer. At the same time, the subject carries with him his canalized drives, interests, attitudes. After a psychodramatic analysis, we know about his *manner of behavior* because we have been directly observing his characteristic manner of behavior (manner of perception, plastic involvement, social interaction).



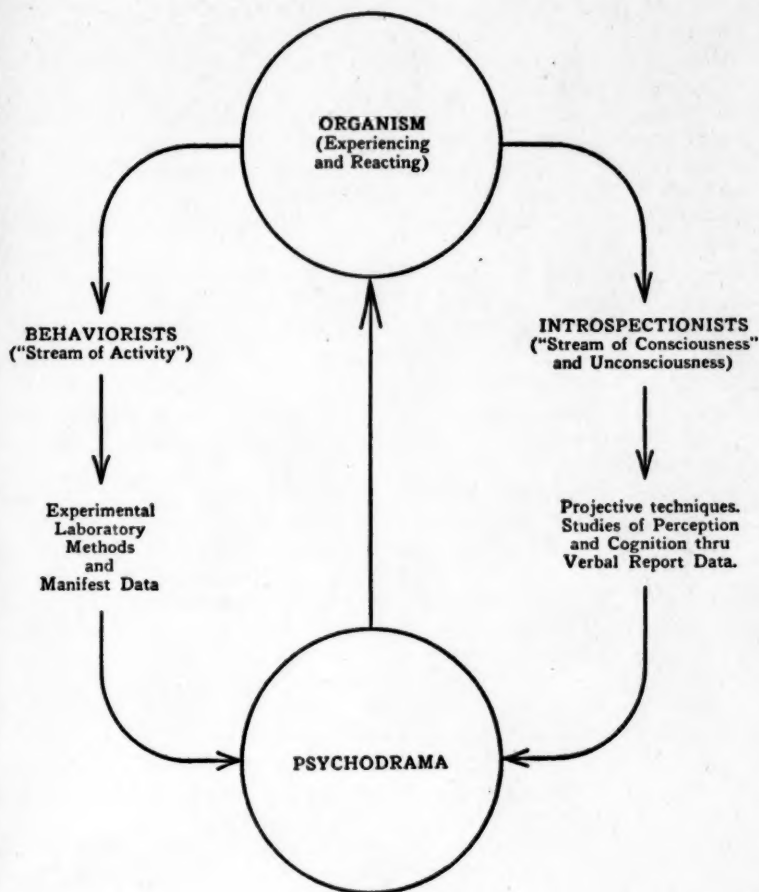
Further, by interpolating difficult psychodramatic resistance, we can "test the limits" of the subject's operational adaptability.

In the situations, we provide a comprehensive theme-stimulation, giving the subject such important motif problems as: love, death, economic problems, status, security, self-realization themes. Nevertheless, however much the subject is stimulated, we do not expect a one-to-one correspondence between the content and themes of the psychodramatic world and the real world. The psychodramatic world can be larger than the social world, because on the psychodramatic stage the subject is liberated from social restrictions, conventions, conserves. Yet, we have found that into the psychodramatic world, subjects spontaneously pour forth much of the content of their social lives.

#### SUMMARY

A methodological survey of projective techniques indicates a historical development from the simple stimulus of a word to the complex, controlled experiment of the psychodramatic situation. From a methodological orientation, it appears the psychodrama represents a comprehensive climax in the history of projective research. The psychodramatic process is a whirl of activity, to which we can direct flicker slits of questions that factor out, as does the stroboscope, patterns of perception, plastic involvement, projective phantasy, and interpersonal relations. This article represents a review of our analysis of the dynamic process of psychodrama, from its most primitive to its most complex stage, and relates the various expressive and projective techniques to the stages of our psychodramatic review.

It is a commonplace, that the *method* of securing data is the determiner of the theory devised. The introspectionists have created the "stream of consciousness," and have abstracted their direction further by going into "streams of *unconsciousness*," via verbal reports and projective techniques. Supposedly antithetical to this scientific attitude has been the behaviorist-positivistic trend, which for a time denied the validity of verbal reports and even denied that "mind" could be studied. This attitude insisted upon laboratory techniques and manifest experimental data subject to public scrutiny. In psychodrama, competently administered, we see an experimental situation capable of converging these two trends back to a study of the experiencing and reacting organism who gave birth to both kinds of data.



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## FEAR OF VIOLENCE AND FEAR OF FRAUD

WITH SOME REMARKS ON THE SOCIAL PSYCHOLOGY OF ANTISEMITISM

GUSTAV ICHHEISER

Talladega College, Alabama

### THE FEAR OF "GANGSTERS" AND THE FEAR OF "SWINDLERS"

(From our childhood on we feel threatened in our social relations by two basic kinds of real or potential dangers. On the one hand, we fear that somebody may harm us by using, or threatening to use, *physical force* (violence). On the other hand, we fear that someone may harm us by, using some kind of *fraud, deception, or manipulation*. Violence and fraud, therefore, constitute two fundamental forms of dangers in inter-human relations towards which we react with fear and hostility. They deeply affect the whole framework of our social experience.)

In order to have a catchword, we wish to call the first type of fear the *fear of gangsters*, the second the *fear of swindlers*. "Gangsters" and "swindlers" may be considered, in this context, as two *personified symbols* of those two fundamental forms of danger in social life.

Our thesis is that the predominance of the one or the other type of fear and hostility affects deeply the make-up of a given personality, and, especially in times of increased insecurity, determines the character of its social and political attitudes.

The predominance of the one, or the other, form of fear and hostility may, obviously, be conditioned both by individual and by social factors (situational) factors. The question is: what kind of individual or social factors have to be considered as *relevant* in this respect? Without pretending to be able to give an exhaustive answer to this question, we shall attempt to indicate some of the probably most important factors here under discussion.

### SOME INDIVIDUAL FACTORS WHICH MAY CONDITION THE PREDOMINANCE OF THE ONE OR THE OTHER TYPE OF FEAR

Whether our predominant fear and hostility refers rather to the dangers of brutality and violence ("gangsters"), or rather to the dangers of fraud and manipulation ("swindlers"), depends probably,

A) On whether, in the course of our life, we have experienced stronger emotional shocks of the one or of the other kind. The trauma of having been deceived, or fallen victim of some kind of manipulation, especially by those in whom we have had full confidence, can affect the make-up of



our personality as deeply as the trauma of having been physically mistreated. This experience of having been deceived marks often the end of a phase in the development of a given personality. It terminates the phase of a naive attitude to life in which things have been confidently taken at their face value. It initiates a new phase characterized by a rather suspicious (critical, sceptical) attitude which splits the until then mono-dimensional experience of life into the two dimensions of "reality" and "sham." It depends further,

B) On whether we feel ourselves better equipped, bio-psychologically, to cope with the dangers created by violence or with the dangers created by fraud. The physically strong and courageous, other things being equal, will rather fear the "swindlers" than the "gangsters," especially if he does not feel able to handle very well the different defensive counter-measures against fraud and manipulation. On the other hand, the shrewd and crafty, but lacking in physical strength and courage, will rather tend to fear the "gangsters." It depends finally,

C) On whether, and to what degree, an individual is sensitized with regard to the truth, the sincerity, the loyalty, in social relationships. It is of no importance in this context, whether the form and degree of this sensitivity depends on the personality type, or on some other factors. Important here is the fact that actually certain individuals feel, emotionally as well as morally, more comfortable in facing *overt* even if otherwise unpleasant relationships, whereas other individuals prefer to have unpleasant or antagonistic relationships *covered up*, by politeness, or hypocrisy, or whatever it may be. It has been noticed, for instance, that certain personality types feel more comfortable, and even psychologically more "free," in relationships of an overt subordination, like those existing in an army, than in relationships of a covert subordination, like those existing in an office, or a factory. People of this type may feel also the disguised hostility or coercion to be more painful than overt forms of antagonism and struggle.

These, then, are, if we are not mistaken, some of the more important factors which may influence emotional attitudes and reactions towards the two main types of social dangers: towards the "gangsters" as symbols of violence and brutality, and towards the "swindlers" as symbols of fraud and deception.

It is justified to assume that sex and age play also an important part in conditioning the two types of fear. However, it may be advisable to consider, psychologically, the influence of sex and age under the three aspects outlined above.

SOME SOCIAL FACTORS WHICH MAY CONDITION THE PREDOMINANCE OF  
THE ONE OR THE OTHER TYPE OF FEAR

We shall limit ourselves to consideration of two kinds of social factors which appear to be of great importance with regard to the problems here under discussion.

A) It is quite obvious that certain types of societies, or certain particular conditions prevailing in a society at a given time, such as, for instance, actual or probable wars or revolutions on the one hand, economic insecurities on the other, tend to generate respectively the fear of violence and brutality, or the fear of fraud and deception ("manipulation behind the scenes").

Now it is equally obvious that in modern society, under normal conditions, the danger of overt violence plays in everyday life an infinitely smaller role as compared with the more indirect, and often disguised, forms of social danger. Conflicts and antagonisms, oppression, discrimination, exploitation in "civilized societies" are generally carried out by using covert, indirect forms of action: by deceptive manipulations and stratagems of every description on the one hand, by "non-violent," especially economic pressures, on the other. Especially, in times like our own, characterized by deep economic insecurities, ideological confusion, fluidity and impenetrability of intricate social processes, by propaganda, advertising, adulteration of goods, the man in the street feels himself far more deeply threatened by those rather "invisible" social dangers than by overt coercion and violence. And he is getting more and more suspicious that those invisible processes by which he is threatened are intentionally, and for someone's advantage, manipulated by some kind of swindlers "behind the scenes." Consequently, the swindler—the manipulator behind the scene—*becomes the main symbol of the predominant fear.*

Furthermore, the swindler, and the forces and dangers which he represents, is more *intangible* and, therefore, more *uncanny* than the gangster, and the forces which the latter represents. The former cannot, as can the latter, be faced and grasped and battled in an open way. He is everywhere and nowhere, he can neither be faced nor grasped, he evades any definite and clearcut showdown. Thus, the average person feels profoundly helpless and powerless with regard to this kind of "enemy."\*

B) Of great importance, too, is the fact that in our society it is the

\*See Kurt Riezker: The Social Psychology of Fear, *Amer. J. of Sociology*, 1944, pp. 489-498.

*overt* form of hostility and struggle which is, more than anything else, stigmatized and morally condemned. In all forms of antagonistic relationships, individuals as well as groups have, under normal conditions, to be very careful to use, as far as possible, only non-violent techniques of coercion, either economic means of pressure, or some disguised forms of manipulation. Otherwise, they face the risk of provoking an indignant reaction of "public opinion."\* As a consequence, a state of affairs is established in interpersonal and intergroup relations according to which only those means of coercion, discrimination, and exploitation are admitted by the mores which *cannot be overtly perceived as a form of hostility*. The actual hostility and struggle which permeates interhuman relationships has to remain hidden. The appearance has to be maintained that there is no struggle and no hostility at all but only "harmony of interests" and "friendly cooperation."\*\*

The individual, therefore, who in times of social disorganization and ideological disintegration tends to fear more than anything else the invisible, intangible, indirect social dangers as personified, and allegedly manipulated, by swindlers, sees himself caught in the following *emotional dilemma*.

His moral standards impel him to take the most negative and condemning attitude towards any form of overt brutality and violence. At the same time, however, certain experiences of everyday life arouse in him the feeling that brutality and violence are by no means always the worse of the evils. For the real "enemy" to be feared and to be hated is the disguised form of coercion, oppression, exploitation, and the symbol as well as manipulator of those dangers—the "swindler." And there are many people in many lands whose not quite admitted, and often repressed, emotions are not without sympathy with the "gangsters," who, although using the morally condemned violence, appear to be at least "open" and "sincere."

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\*Cf. "Frustration and Aggression," The Institute of Human Relations, 1939, p. 33: "The overt vs. non-overt dimension achieves its importance primarily from the fact that in our own society, as well as in many others, it is the overt aggressions which are frequently punished."

\*\*The most penetrating sociologically minded analysis of these facts with regard to the international relations—economic means of coercion vs. political and military means of coercion—is to be found in E. H. Carr: "The Twenty Years Crisis, An Introduction to the Study of International Relations," London, 1939. Cf. also, Robert L. Hale: "Coercion and Distribution in a Supposedly Non-coercive State." *Pol. Sc. Quarterly*, Sept. 1923. About overt and covert, violent and non-violent forms of coercion see Reinhold Niebuhr: "Moral Man and Immoral Society," New York, 1936.

## THE SHIFT IN THE BASIS OF POWER IN SOCIAL RELATIONS\*

Originally, power and leadership had its basis in *bio-psychological* superiority of an individual: in his *physical force*.\*\* The individual who was *biologically strong* was, by this very fact, also *socially strong*.

However, the progress of civilization, the transformation of forms of social organization, and of moral values has brought about a decisive shift in the personal and social conditions of power. This shift has proceeded in two main directions:

A) The originally predominant importance of the *biological* equipment of the individual with regard to his power-ability has been gradually replaced by the importance of his psychological equipment. Not the physically strong (the "soldier") but the shrewd, the clever, and the master of social strategy becomes the predominant power type. The "lions" are being replaced more and more by the "foxes."\*\*\*

B) The predominance of the *immediate personal*, be it physical or mental equipment, is being more and more replaced or supplemented by socially acquired and transmitted *indirect* means of power: by privileges of any description, especially money. The lions as well as the foxes are being replaced by owners of power—producing social symbols: by the privileged and the rich.

This double shift in the basis of power is, therefore, characterized by the replacement of *biological* means of coercion and power (physical force), firstly by *bio-psychological* means (cleverness, shrewdness, etc.), and secondly, by *social* means (different power symbols, like money). Both, the power of the "clever" and the power of the "rich," represent a departure of the means of power from the original biological basis.

Concomitant to this shift in the actual basis of power in interhuman relations, a transformation of *moral* standards is taking place with reference to the evaluation of different types of coercion. Whereas the overt (physical) types of coercion are being more and more stigmatized and eliminated, the psychological and indirect types of coercion are being either treated as "non-existent," or at least tolerated as "legitimate." Con-

\*We use here the concept of power in terms of a social-psychological approach. Thus, power is the ability to compel other people to do, or not to do, what we want them to do, or not to do. See H. Goldhamer and Edward A. Shills: "Types of Power and Status," the *Amer. Jour. of Sociology*, 1939.

\*\*Cf. Charles E. Merriam: "Political Power," New York and London, 1934, p. 36.

\*\*\*The distinction of these two types of personality plays an important part in Vilfredo Pareto's theory about the "circulation of the elites."

sequently, the whole fabric of coercive mechanisms *departs more and more from the original biological basis* and grows more and more indirect and disguised. Finally, the "law of force" is replaced by the more respectable "law of deception."

Under normal conditions, these indirect and disguised forms of coercion, legalized by tradition and by mores, are accepted and taken for granted. If they are completely interiorized, they may even cease to be sensed as "coercion." However, in times of an acute social disorganization and ideological disintegration, the growing insecurities and the feeling of being trapped in an invisible but nonetheless unbreakable network of coercion and dependence, of being helpless and powerless to cope with those *evasive* social dangers and pressures, in such times there emerges among the masses the vague, and often repressed, conviction that, after all, it would be perhaps better, and less tantalizing, if all those disguised hostilities and concealed forms of dangers would at last be drawn into the open. It grows and spreads the conviction that those invisible and intangible forms of social relations are sometimes much more dangerous and more monstrous than even the most brutal forms of hostility and coercion. For the latter are, at least, overt and "sincere." Once this stage of social disorganization and ideological confusion is reached, then *not the violence and brutal force but hypocrisy, deception and manipulation may easily become the main target of the hostility of the masses*. And, under such conditions, the fact that those repressed hostilities and disguised forms of coercion are being drawn into the open may even have, psychologically, the effect of a releasing catharsis.

Only against the background of those social experiences and emotional reactions can certain aspects of the psychology of antisemitism be fully understood. In the following section we shall attempt to make explicit the socio-psychological relation which obtains between the "fear of swindlers," predominant in our age, and the "modern" form of antisemitism.

#### THE FEAR OF "SWINDLERS," THE GLORIFICATION OF "GANGSTERS," AND THE SOCIAL PSYCHOLOGY OF ANTISEMITISM

"Politics, as a practice, whatever its profession, had always been the systematic organization of hatred."\* Antisemitism, as a political weapon, is one of the psychologically most effective forms of a "systematic organ-

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\*"The Education of Henry Adams."



ization of hatred." Its effectiveness is the consequence of the fact that it appeals to the deep seated *fear of fraud* which permeates the feeling and thinking of the masses, especially in our age."\*

The Jews, namely, for various reasons *lend themselves extremely well to be used as an impressive symbol of the "swindler."*\*\* In this context it is of no importance to determine what, and how, the Jews "really are." We are trying only to explain why they lend themselves to be used as symbol and target of the "fear of fraud." On the one hand, the Jews by not being either workers, or peasants, or soldiers, symbolize the type of people who although not working in a visible and tangible way, are nevertheless successful, and getting ahead, by performing more or less "mysterious" and "surreptitious" manipulations "behind the scene." On the other hand, the peculiar history of Jews, the lack of their own country, their own state, their own army, the predilection, for whatever reasons it may be, toward living in cities in an industrialized and commercialized atmosphere, has engendered the Jewish attitudes of "worshipping the false intellectual values" of shrewdness and cleverness, and disparaging the "original biological values" of physical strength and physical courage. Thus, in the hands of a diabolically clever propagandist, the Jews became an impressive and convincing symbol of the "up-rooted swindler"—the counter-symbol of the "straightforward soldier-peasant-gangster-hero" who is "solidly rooted in blood and soil."

If, therefore, our psychological hypothesis is correct, one of the deeper causes of the political effectiveness of the modern forms of antisemitism is to be found in the fact that it appeals to the widespread and deepseated, conscious or sub-conscious, fear of, and hostility against the "swindlers" as a personified symbol of all kinds of deception, fraud, manipulation, intrigue, of disguised coercion and intangible oppression. It dramatizes, therefore, the experiences of everyday life in terms of a battle of the straightforward "soldier-hero-gangster" against those uncanny and evasive forces

\*Our remarks refer especially, but by no means exclusively, to the Nazi type of antisemitism.

\*\**In re* Jews as a symbol of "swindlers," as a symbol of something uncanny and mysterious, see for instance "Essays on Antisemitism," ed. by Koppel S. Pinson, Conference on Jewish Relations, New York, 1942, p. 128-129. Also "Jews in a Gentile World," ed. by J. Graeber and St. H. Britt, Macmillan Co., New York, 1942, especially the articles "Religious and Political Aspects of Anti-Judaism," by Carl Mayer, and "Anti-Semitism—A Product of Economic Myths," by Miriam Beard. See also Louis Wirth: "The Ghetto," Univ. of Chicago Press, 1929, pp. 75-78.

and dangers by which the masses feel themselves threatened, and with which, just because of their evasiveness, they are unable to cope. Thus, the vague fears are released, the focus of identification as well as a personal object of hostility is defined, and the until now invisible and evasive enemy can be at last faced, grasped, and battled.

## SECTIONAL VARIATIONS IN WELFARE ESPECIALLY OF THE WHITE POPULATION

EDWARD L. THORNDIKE  
*Columbia University*

### ABSTRACT

Indices of the general welfare, per capital income, and personal qualities of the white population of each state were computed. The southern and southwestern states rank low in all three. The personal qualities score of the white population of a state is closely affiliated with the fewness of non-whites; and whatever it is that they have in common accounts for much of the variation in the general welfare of the total population and also of the white population. The evidence inclines toward the hypothesis that this common factor is the character of the early immigration. The per capita income of the white population is less important for the welfare of a southern state than any one of several other factors.

It is known that Virginia, the Carolinas, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas and Louisiana, rank low in wealth and welfare as estimated by accepted criteria. This is as true of their cities as of their rural districts.

Nothing short of an elaborate and searching historical and statistical study of these states and others from their first settlement will be adequate to reveal the causation of this difference. But perhaps some suggestions and promising hypotheses may be found by a study of the concomitants and affiliations of low status in wealth and welfare, using the techniques of multiple correlation and path coefficients.

Consider the facts of Table 1, each of which is a deviation from the median of the forty-eight states, + meaning superiority (greater per-capita income, lower infant mortality, more children in school, fewer homicides, etc.), and — meaning inferiority, to that median. Table 1 shows (1) that the common judgment concerning the relatively low status of the South in welfare and income is fully supported by an impartial collection of measures, (2) that it ranks low also in an index ( $P$ ) of certain personal qualities of the population, (3) that the South still ranks very low when the general goodness of life for white people only is measured by the nine items which are available, (4) that it still ranks low when an index ( $P_{wh}$ ) of certain personal qualities of the white population only is made up from the facts for the frequency of home ownership and of

TABLE 1

The Scores of Eleven Southern States and of Six New England States in

 $G$ ,  $I$ ,  $P$ ,  $G_{wh}$  and  $P_{wh}$  for 1930.

$G$  is a composite of thirty-six scores indicative of the goodness of life for good people.

$I$  is a composite of nine scores indicative of per capita income.

$P$  is a composite of ten scores indicative of certain personal qualities in a population.

$G_{wh}$  is a composite of nine of the thirty-six scores in  $G$  which were available for the white population.

$P_{wh}$  is a composite of five of the ten scores in  $P$  which were available for the white population.

The constituents of  $G$ ,  $I$ ,  $P$ ,  $G_{wh}$  and  $P_{wh}$ , and their relative weights in the composite, are described in a Note at the end of this article.

	$G$	$I$	$P$	$G_{wh}$	$P_{wh}$
Alabama	-25	-15	-29	-14	-8
Arkansas	-23	-15	-17	-10	-5
Florida	-22	-5	-28	-3	-10
Georgia	-29	-15	-28	-15	-7
Kentucky	-19	-10	-14	-8	-9
Louisiana	-24	-10	-29	-8	-13
Mississippi	-28	-17	-32	-10	-5
N. Carolina	-22	-15	-17	-12	-6
S. Carolina	-29	-17	-32	-19	-10
Tennessee	-22	-11	-17	-9	-8
Virginia	-19	-8	-15	-6	-7
Connecticut	+11	+16	+8	+1	+2
Maine	-5	-2	+12	-3	+3
Massachusetts	+7	+17	+6	+4	+2
New Hampshire	-0	+2	+11	+0	+4
Rhode Island	-1	+8	-1	-3	+1
Vermont	-2	-1	+12	-6	+4

farm ownership, and the infrequency of homicide, syphilis, and illiteracy, in the white population.

$P$  and  $P_{wh}$  do not represent a complete appraisal of desirable personal qualities and their incompleteness may be unfair to the South. But I must confess that in a rather elaborate search for other items I have found only corroborations of the  $P$  and  $P_{wh}$  ratings. Thus the percentage of blind persons in the white population of a community in 1890 was a result of gonorrhoeal infection at birth and deficient care against accidents thereafter.

The percentages for the eleven states of the South were much above the median state. They occupy ranks 46, 45, 41, 39, 36, 34, 32, 30, 21, 19 and 16 in an order in which 1 is the state with the fewest white blind persons per 1000 white population and 48 is the state with the most. Census reports of the congenitally blind, deaf and dumb, and feeble minded among the white population are less trustworthy than the simple test made of blindness (whether the person could see the fingers of the agent held a foot in front of the eyes), but may be accepted as impartial between sections of the country until there is evidence to the contrary. In a composite of the three the eleven states ranked 48, 47, 44, 42 or 43, 41, 38 or 39, 37, 36, 35, 31, and 29.

Sampling the populations at the other end of the distribution by the number of persons born in each state who are in the 1938-39 *Who's Who*, in the 1938 *American Men of Science*, and in the 1932 *Leaders in Education* (but in neither the *Who's Who* or *American Men of Science* lists) we find that the number per ten thousand of white population in 1880 (1890 in the case of the *American Men of Science*) is as shown below:

	Per 10,000 white population		
	<i>Who's Who</i>	<i>American Men of Science</i>	<i>Leaders in Education</i>
Median of the 11 Southern States	5.4	2.1	0.75
Median of the 6 New England States	8.1	5.7	1.31
Median of Texas, Oklahoma, New Mexico, Arizona, Maryland, West Virginia, and Missouri*	4.6	3.3	0.89
Median of the other 24 states	6.8	5.0	1.25

\*In the case of Oklahoma an estimate of the birth-rate of superior men has to be made from the facts since it was opened to settlers. If the estimates for Oklahoma are not used the medians are 4.5, 3.0 and .94.

The status of a city, state or other community in  $P$  or  $P_{wh}$  or any other valid evidence concerning its personnel is of great importance. Consider the determination of  $G$ , and also of  $G_{wh}$ , by  $P_{wh}$  and the percentage of non-whites (chiefly Negroes and Mexican Indians), in the case of the 48 states. By computing the correlations and the resulting path-coefficients it is found that the variation of  $G$  among the 48 states is attributable:

- 9½ percent to factors measured by  $P_{wh}$  and not by the percentage of non-whites,
- 40½ percent to factors measured by the percentage of non-whites and not by  $P_{wh}$ ,



29½ percent to factors common to  $P_{wh}$  and the percentage of non-whites,  
 20½ percent to factors independent of both  $P_{wh}$  and % of non-whites.

The variation in  $G_{wh}$  among the 48 states is attributable:

37 percent to factors measured by  $P_{wh}$  and not by % non-white,  
 5 percent to factors measured by % non-white and not by  $P_{wh}$ ,  
 21 percent to factors common to  $P_{wh}$  and % of non-white,  
 37 per cent to factors independent of both  $P_{wh}$  and % of non-white.

These determinations show (5) that the rareness of Negroes, Mexican Indians, and other "Colored" has a great influence on the welfare of the total population and a substantial influence upon the welfare of the whites, (6) that by even a rough index of the personal qualities of the white population, they have a substantial influence upon the welfare of the total population and a very great influence upon the welfare of the whites, (7) that the percentage of "Colored" and low score for the personal qualities of the white population are affiliated, and (8) that whatever it is that they have in common accounts for three-tenths of the variation in  $G$  and for two-tenths of the variation of  $G_{wh}$ . The last two facts are obviously of great importance.

What do they have in common? The community must be in events and conditions, not persons, for the persons concerned are 100 percent different. Among the events and conditions which deserve consideration are the action of whites upon Colored, the action of Colored upon whites, the action of the Civil War upon both, the action of legislation in favor of the North at the expense of the South upon both, the action of the physical and biological environment including malaria, hook-worm, and the like upon both, and the selection by the southern colonies and later the southern states of relatively large numbers of colored immigrants and of white immigrants ranking low in the qualities measured by  $P$  and  $P_{wh}$ .

The Negroes, and presumably also the Mexican Indians, probably imitated white masters in many ways. The matter should be studied, but I have no data to report concerning it. According to Freudian theory, accepted by many psychiatrists, the early experiences of white children with colored nurses could inoculate whites with mental traits of the colored. I am skeptical concerning the magnitude of this influence, but have no data to report concerning it.

Concerning the Civil War, it is important to note that Texas, New Mexico and Arizona, whose wealth and welfare were impaired directly by the Civil War little, if any, more than the wealth and welfare of the northern states, rank very low in  $G$ ,  $I$ ,  $P$ ,  $G_{wh}$  and  $P_{wh}$ . The facts appear in Table II.

TABLE II  
The Scores of Three Southwestern States in  $G$ ,  $I$ ,  $P$ ,  $G_{wh}$  and  $P_{wh}$ .

	$G$	$I$	$P$	$G_{wh}$	$P_{wh}$
Arizona	-9	3	-14	-12	-7
New Mexico	-20	-7	-19	-32	-18
Texas	-16	-5	-16	-6	-6

Just what the war did to the South and to the North is for economic and social historians to decide. If there was no difference between the Northern and Southern whites in 1860, a selective death rate in the war could have changed it toward the great difference existing in 1930. So could selective marriage and birth rates during and after the war. So could differences in the quality of home, school, vocational training, in so far as these modify men. So perhaps could the greater relative loss of property in the South, though the evidence that reducing a man's wealth decreases the  $P$  of him or his children is weak. But the burden of proof is upon historians to show that these and other consequences of the war are adequate to account for the magnitude of the differences in  $P$  in 1930.

Concerning the physical and biological environments, I have no facts to offer.

The hypothesis that the white immigrants into the south were lower in  $P$  than those who came to the north will be unattractive to many, either because of a belief that the indentured servants and other laborers imported by large landowners carried as able and good genes in their chromosomes as the Pilgrims and Puritans, or because of memories of Washington, Jefferson, Madison, Poe, Lanier, and other great men of the south, or, more reasonably, because of a survey of the entire immigration of three centuries. But the hypothesis should be considered seriously.

Suppose that the North-South difference in  $P$  was as great in 1830 as in 1930, and that migration within the country from 1830 to 1930 was predominantly to the west with only moderate veering north or south. These hypotheses would help to explain why  $P$  and  $P_{wh}$  are low in Texas, New Mexico and Arizona. The Southern migrants took colored people with them, or attracted them from Mexico, or at least tolerated them where they found them. Low  $P_w$  thus maintained its affiliation with % colored. These hypotheses would also be in harmony with the fact that Maryland, West Virginia, and Oklahoma are low in  $G$ ,  $P$ ,  $G_{wh}$  and  $P_{wh}$ , their ratings being:

	<i>G</i>	<i>P</i>	<i>G<sub>wh</sub></i>	<i>P<sub>wh</sub></i>
Maryland	-12	-8	-4	0
Oklahoma	-8	-6	0	-3
West Virginia	-13	-9	-9	-7

All three have percentages of Negroes and of Colored above the median.

To the writer at least it appears probable that the affiliation of *P<sub>wh</sub>* and % Colored is in large part due to sectional differences in the early immigrants.

Some further evidence concerning this hypothesis is found by examining the variance among the southern states in *G<sub>wh</sub>*, *P<sub>wh</sub>* % colored, % blind whites, % congenital defectives, % *Who's Who*,  $\frac{1}{2}$  *American Men of Science*, and % *Leaders in Education*. These variations and correlations are also interesting and important for other reasons. Table III shows the status of each of the eleven southern states reckoned as a deviation from the median of the eleven.\* Table IV shows the correlations between each pair of measures among the eleven states.

Note first that the intercorrelations between *Who's Who*, *American Men of Science*, and *Leaders in Education* are positive and high (.81, .84 and .82),

TABLE III

THE SCORES OF EACH STATE IN EACH OF TEN MEASURES, TAKEN ALWAYS AS A DEVIATION FROM THE CENTRAL TENDENCY OF THE ELEVEN STATES

	<i>G</i>	<i>G<sub>wh</sub></i>	<i>P</i>	<i>P<sub>wh</sub></i>	% col- ored(re- versed)	% blind, defectives, whites(re- versed)	% con- genital whites (reversed)	Superior birth-rate per white population <i>Who's Who</i>	Men of Science	Leaders in Educ.
Alabama	-2	-4	-5	0	-8	-1	1	1	-2	10
Arkansas	0	0	7	3	1	-4	14	-26	-5	-14
Florida	1	7	-4	-2	0	5	18	3	-1	-22
Georgia	-6	-5	-4	1	-9	2	0	-4	-3	0
Kentucky	4	2	10	-1	20	-3	-20	-17	-1	-17
Louisiana	-1	2	-5	-5	-10	3	2	-14	1	-19
Mississippi	-5	0	-8	3	-24	1	30	1	7	5
No. Carolina	1	-2	7	2	1	1	-58	1	4	2
So. Carolina	-6	-9	-8	-2	-16	0	-19	30	23	66
Tennessee	1	1	7	0	10	-3	-14	-9	-3	-19
Virginia	4	4	9	1	3	-2	-48	26	22	27

\*Or from a score which makes a five-six split.

TABLE IV  
THE INTERCORRELATIONS OF THE MEASURES OF TABLE III

	<i>G</i>	<i>G<sub>wh</sub></i>	<i>P</i>	<i>P<sub>wh</sub></i>	<i>Col.</i>	<i>Blind</i>	<i>Def.</i>	<i>W.W.</i>	<i>A.M.S.</i>	<i>L.Ed.</i>
<i>G</i>		.73	.79	-.05	.88	-.32	-.35	-.19	-.17	-.44
<i>G<sub>wh</sub></i>	.73		.05	-.12	.46	.13	.13	-.27	-.24	-.53
<i>P</i>	.79	.05		.31	.82	-.66	-.58	-.29	-.08	-.30
<i>P<sub>wh</sub></i>	-.05	-.12	.31		-.04	-.43	-.03	-.07	-.06	.04
<i>Col.</i>	.88	.46	.82	-.04		-.45	-.33	-.34	-.36	-.46
<i>Blind</i>	-.32	.13	-.66	-.43	-.45		.26	.20	-.02	-.08
<i>Def.</i>	-.35	.13	-.58	-.03	-.33	.26		-.36	-.51	-.34
<i>W. W.</i>	-.19	-.27	-.29	-.07	-.34	.20	-.36		.81	.84
<i>A. M. S.</i>	-.17	-.24	-.08	-.06	-.36	-.02	-.51	.81		.82
<i>L. Ed.</i>	-.44	-.53	-.30	.04	-.46	-.08	-.34	.84	.82	

and that the correlations between *Col.* and *G* and *P* are positive and high (.88 and .82). These and others concerning which we could have reasonable expectations are reasonable; consequently, the rest of the table deserves examination.

*Who's Who*, *American Men of Science*, and *Leaders in Education* correlate with nothing in the table save themselves. Their twenty-one other correlations run from .20 to -.53, with a median at -.27. Much the same is true of "Blind" and "Def". Their highest correlation is with each other, but that is only .26. The median of their six correlations with *W.W.*, *A.M.S.*, and *L.E.* is -.21. The median of their ten correlations with *G*, *G<sub>wh</sub>*, etc. is -.34. *P<sub>wh</sub>* behaves similarly in the intercorrelations. Its highest correlation is with *P* (.31). The median of its eight others is  $-.05\frac{1}{2}$ . Its three others after excluding *Who's Who*, *Men of Science*, *Leaders in Education*, *Blind*, and *Defectives* are -.04, -.05, and -.12.

Every measure of the quality of the white population thus fails to be significant among the eleven states, though it was very significant among the entire forty-eight. In particular, they all fail to be significant for *G* and *G<sub>wh</sub>*. The variation of the eleven states in *G* and in *G<sub>wh</sub>* cannot be accounted for at all without using *Col.* (or *P*, which includes the qualities of the Colored populations). Seventy-seven percent of the variation among the eleven states in *G* is attributable to *Col.* alone. *Col.* and *P<sub>wh</sub>* (which, together, accounted for 85 percent of the variation in *G* among the 48 states) account for hardly a jot more of the variation among the eleven than *Col.* alone does (and do that only by the utterly unwarrantable procedure of reversing the *P<sub>wh</sub>* scale). Though 37 percent of the variation of the 48 states in *G<sub>wh</sub>* was attributable to *P<sub>wh</sub>*, and 21 percent of it to factors common to *P<sub>wh</sub>*

and *Col.*, none of the variation of the eleven states is. It should be noted also that *Col.* and *P* together account for hardly a jot more of the variation in *G* ( $77\frac{1}{2}$  percent of it) than *Col.* alone does. This corroborates the facts for *Col.* and  $P_{wh}$  in the eleven states.

All these facts are in harmony with the hypothesis that the community of  $P_{wh}$  and *Col.* is largely due to the fact that the early white immigrants to Virginia, to North Carolina, to South Carolina, and to Georgia were in the main alike in *P inter se* but different from the immigrants to New England. Any valid hypothesis should explain the fact that, in 1930, the variation among these eleven states in *G* was independent of the variation in  $P_{wh}$  but very dependent on the infrequency of the Colored population.\*

So far no use has been made of the per capita income of the whites. This has been left out of account to simplify the presentation, and also because the best index ( $I_{wh}$ ) of per capita income of whites that I can offer is a crude one. It is a composite of the three following scores:

(1) The estimated number of whites in the state reporting net incomes of \$5000 or over, obtained by subtracting one from the total number of such persons for each 10,000 Colored. This number is then divided by the white population.

(2) The estimated number of income-tax returns by whites, obtained by subtracting one from the total number of returns for each 1000 Colored. This number is then divided by the white population.

(3) A composite of (a) the median value of the homes owned by native-born whites, (b) the median value of the homes owned by foreign-born whites, (c) the median rental of the homes rented by native-born whites, and (d) the median rental of the homes rented by foreign-born whites, native-born and foreign-born being given relative weights of 2 and 1, owned and rented homes being given equal weights. Items 1, 2, and 3 were given approximate weights of 8, 13, and 6 in the final composite score used. Though crude, this  $I_{wh}$  correlates .94 with the regular *I* in the thirty states which have so small a non-white population that it is negligible, and will probably not be misleading in any of the uses we shall make of it.

The first is to measure the comparative per capita income of the white populations in the different states. Table V reports the facts, and includes also, for purposes of reference,  $G_{wh}$  and  $P_{wh}$  scores. The  $G_{wh}$ ,  $I_{wh}$ , and  $P_{wh}$  scores of Table V should not be used as authoritative for individual states

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\*For these eleven states the percentage of Negroes (reversed) will throughout give the same results as *Col.*



TABLE V.  
THE  $G_{wh}$ ,  $I_{wh}$  AND  $P_{wh}$  SCORES OF EACH STATE

	$G_{wh}$	$I_{wh}$	$P_{wh}$
Alabama	-14	-3	-8
Arizona	-12	3	-7
Arkansas	-10	-5	-5
California	10	11	3
Colorado	-6	1	-1
Connecticut	1	9	2
Delaware	-3	7	0
Florida	-3	3	-10
Georgia	-15	-2	-7
Idaho	8	-4	3
Illinois	3	10	0
Indiana	1	-1	1
Iowa	7	-2	3
Kansas	6	-3	1
Kentucky	-8	-3	-9
Louisiana	-8	1	-13
Maine	-3	-1	3
Maryland	-4	9	0
Massachusetts	4	9	2
Michigan	1	5	1
Minnesota	7	0	2
Mississippi	-10	-4	-5
Missouri	-1	1	-2
Montana	5	-3	-1
Nebraska	7	-1	3
Nevada	1	4	-8
New Hampshire	0	-1	4
New Jersey	2	12	1
New Mexico	-32	-4	-18
New York	5	15	-1
No. Carolina	-12	-4	-6
No. Dakota	3	-4	5
Ohio	3	4	1
Oklahoma	0	-2	-3
Oregon	11	0	1
Pennsylvania	-3	4	2
Rhode Island	-3	5	1
So. Carolina	-19	-3	-10
So. Dakota	8	-4	4
Tennessee	-9	-2	-8
Texas	-6	1	-6
Utah	9	-1	4
Vermont	1	-1	4
Virginia	-6	-1	-7
Washington	11	0	-1
West Virginia	-9	-3	-7
Wisconsin	4	3	4
Wyoming	-1	1	1

(though they will be better than anybody's mere opinion), but will serve for comparing groups of states and computing correlations.

The per capita incomes of the white residents in the eleven southern states are low, but not low enough to account for the lowness of these eleven states in the general welfare score,  $G_{wh}$ . Their average  $I_w$  is  $-2.1$ , about that of Iowa, Kansas, and Nebraska, and below that of the Dakotas, Idaho, and Montana. But the average  $G_w$  is  $-10.4$ , for them,  $+6.7$  for Iowa, Kansas and Nebraska, and  $+6.0$  for the Dakotas, Idaho and Montana.

In general the differences between populations in welfare depend more upon their personal qualities than upon their income. This has been found true for 295 cities of 3000 to 500,000, for 144 cities from 20,000 to 30,000, for 200 cities excluding suburban cities and those of our eleven southern states, and for the total populations of the forty-eight states. It is true for the variation in welfare of white populations so far as  $G_{wh}$  indicates welfare. Of the variation in  $G_{wh}$  in the 48 states, 58 percent is attributable to factors measured by  $P_{wh}$  and not by  $I_{wh}$ , 3 percent is attributable to factors measured by  $I_{wh}$  and not by  $P_{wh}$ ,  $2\frac{1}{2}$  percent is attributable to factors common to  $P_{wh}$  and  $I_{wh}$ .  $36\frac{1}{2}$  percent is attributable to factors independent of both  $P_{wh}$  and  $I_{wh}$ . 26 percent is attributable to factors independent of  $P_{wh}$ ,  $I_{wh}$  and  $\% Col.$  It is literally true that the  $G_{wh}$  of a state depends more upon the fewness of non-whites than upon the income of the whites. If we include the influence of  $\% Col.$ , the percentage of the variation in  $G_{wh}$  accounted for rises from  $63\frac{1}{2}$  to 74. Using the total populations of these states and the dependable measures,  $G$ ,  $P$ , and  $I$ , per capita income of Colored and white accounts for 14 percent of the variation in  $G$ . It is then the poverty of the Negroes rather than the poverty of the whites which is related to the low status of the eleven southern states in  $G$ .

We now turn to differences in  $I_{wh}$  among the eleven states themselves measured from their own median. The correlations are influenced notably by the high status of Florida and the imperfections of  $G_{wh}$ ,  $P_{wh}$  and  $I_{wh}$ , but are at least unprejudiced and are likely to be much nearer the truth than the opinions of a theorist or reformer. They are presented in Table VI along with the correlations with  $I$ , the index of per capita income for the total populations. Even with large allowances, the facts of Table VI suggest strongly that, within the South, (1) the lowness of the incomes of the whites is a small factor in the lowness of  $G$ , (2) the lowness of the incomes of the Colored is a large factor in the lowness not only of  $G$  but also of  $G_{wh}$ , (3) the per capita income of the white population has less to do with  $P$ , and even with  $P_{wh}$ , than the per capita income of the Colored, and (4) few-

TABLE VI  
THE CORRELATIONS OF  $I$  AND  $I_{wh}$  WITH VARIOUS MEASURES IN THE ELEVEN SOUTHERN STATES, ALL MEASURES BEING DEVIATIONS FROM THE MEDIANS OF THE ELEVEN STATES

	$I$ (Index of per capita income of the total population)	$I_{wh}$ (Index of per capita income of the white population)
$G$	.67	.11
$G_{wh}$	.83	.54
$P$	.32	-.22
$P_{wh}$	-.47	-.71
Percent of Colored (reversed)	.51	.01
Average of three superior birth rates	.25	-.08

ness of Colored raises the per capita income of whites little or not at all.

On the whole the correlations of  $I$  and  $I_{wh}$ , for the forty-eight states and for the eleven, reinforce the evidence that personnel is and has been a potent factor, and that the explanation of inter-state differences in  $G$  may reach far back of the war and reconstruction.

NOTE  
CONSTITUENTS OF THE  $G$  SCORE

Item*	ITEMS OF HEALTH	Approximate Weight for States
131. Infant death-rate reversed		13
132. General death-rate reversed		9
134. Typhoid death-rate reversed		5½
136. Appendicitis death-rate reversed		3½
137. Puerperal diseases death-rate reversed		5½
	ITEMS OF EDUCATION	
53. Per capita public expenditures for schools		8
54. Per capita public expenditures for teachers' salaries		7
55. Per capita public expenditures for textbooks and supplies		8
56. Per capita public expenditures for libraries and museums		6
21. Percentage of persons sixteen to seventeen attending schools		4½
22. Percentage of persons eighteen to twenty attending schools		7½
23. Average salary, high-school teachers	}	7½
24. Elementary-school teachers and supervisors		
	ITEMS OF RECREATION	
57. Per capita public expenditures for recreation		7½
17. Per capita acreage of public parks		2

\*The items are more fully described on pages 173 to 187 of *Your City*, by E. L. Thorndike, and also on pages 214 to 223 of Vol. XXXIX of the *Annals of the New York Academy of Sciences*.

## ECONOMIC AND "SOCIAL" ITEMS

107. Rarity of extreme poverty	6¼
108. Rarity of less extreme poverty	6½
153. Infrequency of gainful employment for boys 10-14	4½
154. Infrequency of gainful employment for girls 10-14	5½
223. Average wage of workers in factories	4
106. Frequency of home ownership (per capita number of homes owned)	6
248. Per capita support of the Y. M. C. A.	6
201. Excess of physicians, nurses, and teachers over male domestic servants	6

Item	CREATURE COMFORTS	Approximate Weight for States
98. Per capita domestic installations of electricity		5½
99. Per capita domestic installations of gas		7
102. Per capita number of automobiles		5
103. Per capita domestic installations of telephones		10
104. Per capita domestic installations of radios		6½

## OTHER ITEMS

31. Percentage of literacy in the total population	4
25. Per capita circulation of <i>Better Homes and Gardens</i> , <i>Good House-keeping</i> and the <i>National Geographic Magazine</i>	6
26. Per capita circulation of the <i>Literary Digest</i>	5½
133. Death rate from syphilis (reversed)	4
241. Death rate from homicide (reversed)	3½
243. Death rate from automobile accidents (reversed)	3½
12. Per capita value of asylums, schools, libraries, museums, and parks owned by the public	6
16. Ratio of value of schools, etc., to value of jails, etc.	3
11. Per capita public property minus public debt	5

After the 37 scores were multiplied by amounts such as to make their standard deviations be proportional to the numbers listed above as approximate weights, the sum for each state (called *G3*) was combined with a score (*G1*) which was computed by subtracting the number of features among the 37 in which that state was below the median of the 48 states from the number in which it was above the median of the 48. *G3* and *G1* had relative weights of approximately 2 and 1 respectively in the final *G* score.

It should be kept in mind that Items 11, 12, 16, 56, and 57 are for a state's own property, debt, and expenditures, not for these plus those of the smaller governmental units within its boundaries.

CONSTITUENTS OF THE *I* SCORE

	Approximate Weights for States
Income tax returns (over \$2500)	15
Income tax returns (over \$5000)	7
Average wages: teachers and supervisors	3½
Average wages: retail store employees	7
Average wages: factory employees	7
Expenditures: rent (or equivalent)	3½
Expenditures: food-store sales	4½
Expenditures: cigar-store sales	1
Expenditures: drug-store sales	1

This list has one notable weakness, in that the expenditures are such as respectable people make for respectable purposes. The expenditures for prostitutes, gambling, forbidden drugs, intoxicants, and more or less disreputable entertainment in the states could not be estimated. This weakness acts as a factor for safety in the case of some of our most important conclusions.

CONSTITUENTS OF THE *P* SCORE

The personal qualities index, *P*, is a weighted composite of the deviations from the median in the items listed below, the weights being approximately as stated.

Item	Approximate Weights for States
30. Per capita number of graduates from public high schools in 1934	5
261. Percentage which public expenditures for the maintenance of libraries was of the total public expenditure	2
31. Percentage of illiteracy (reversed)	2 3/5
33. Percentage of illiteracy among those aged 15-24 (reversed)	2 4/5
106. Per capita number of homes owned	5
201. Per capita number of physicians, nurses and teachers minus male domestic servants	4
103. Per capita number of telephones	2 4/5
207d. Number of male dentists divided by number of male lawyers	2
133. Per capita number of deaths from syphilis (reversed)	2 3/5
241. Per capita number of deaths from homicide (reversed)	2 4/5

CONSTITUENTS OF  $G_{wh}$ 

Items 131, 134, 137, 21, 22, 153, 154, 104, and 243 from the *G* list above, but in each case for the white population of the state. The weights were approximately as in the *G* composite.

CONSTITUENTS OF  $P_{wh}$ 

Items 31, 106, 133, and 241 from the *P* list above, but computed for the white population, and also the percentage of white farmers owning their farms.



# SOCIOMETRIC METHODS OF GROUPING AND REGROUPING WITH REFERENCE TO AUTHORITATIVE AND DEMOCRATIC METHODS OF GROUPING

J. L. MORENO AND HELEN H. JENNINGS  
*Sociometric Institute*  
*New York*

## INTRODUCTION

The problem of regrouping on the basis of sociometric findings has been one of the chief themes of *Who Shall Survive?* Groups are in constant process of regrouping unless hindered in this process by coercion—interference by authoritative agents, or by the unbridled, spontaneous dynamics between the members themselves. This study, the first longitudinal sociometric follow up of a community, was completed by the authors in 1935 and first published under the title "Advances in Sociometric Technique" in February 1936 in the *Sociometric Review*, a publication which was superseded by the journal *SOCIOMETRY*. The material was gathered by Helen Jennings,\* the paper was written by J. L. Moreno. The stimulation which it has given to the study of autocratic and democratic atmospheres and the value it might have for problems of resettlement and reorganization of communities in the post war world makes its republication and availability for students of sociometry opportune at this time.

## AUTHORITATIVE AND DEMOCRATIC METHODS OF GROUPING

A simple illustration of sociometric technique is the grouping of children in a dining room.

In a particular cottage of our training school live 28 girls. In their dining room are seven tables. The technique of placing them around these tables can take different forms. We may let them place themselves as they wish, and watch the result. A girl "A" seats herself at table 1; eight girls who are drawn to her try to place themselves at the same table. But table 1 can hold only three more. The result is a struggle and somebody has to interfere and arrange them in some arbitrary manner. A girl "B" runs to table 2, but nobody attempts to join her; thus three places at that table remain unused. We find that the technique of letting the girls place themselves works out to be impracticable. It brings forth difficulties which enforce arbitrary, authoritative interference with their wishes, the opposite princi-

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\*Tables A, B, C, D, and E included in this paper were prepared in collaboration with Mary Martha Gordon, Anna Marie Little and H. Betty Janaske.

ciple from the one which was intended, a free, democratic, individualistic process.

Another technique of placement is one applied strictly from the point of view of the authoritative supervisor of the dining room. She places them in such a fashion that they produce the least trouble to her without regard to the way in which the girls themselves feel about the placements. Or she picks for each of the seven tables a leader around whom she groups the rest without regard to the leader's feelings about them and without consideration of whether the "leader" is regarded by the girls as a leader.

#### SOCIOMETRIC METHOD OF GROUPING

A more satisfactory technique of placement is to ask the girls with whom they want to sit at the same table, and, if every table seats at least four, to give every girl three choices; to tell them that every effort will be made that each may have at her table at least one of her choices, and, if possible, her first choice. Every girl writes down first whom she wants as a first choice; next, whom she wants as a second choice if she cannot receive her first choice; and last, whom she wants as a third choice if she cannot have her first or second choice. The slips are collected and analyzed. The structure of affinities one for another is charted. The best possible relationship available within the structure of interrelations defines the *optimum of placement*. This is the highest reciprocated choice from the point of view of the girl. The order is as follows: a subject's first choice is reciprocated by a first choice, 1:1; a subject's first choice is reciprocated by a second choice, 1:2; a subject's first choice is reciprocated by a third choice, 1:3; a subject's second choice is reciprocated by a first choice, 2:1; 2:2; 2:3; 3:1; 3:2; 3:3. Where there is no choice that meets with a mutual response, the first choice of the girl (1:0) becomes her optimum, that is, from her point of view, the best placement for her available within the structure.

TABLE A  
Sociometric Study of Seating Arrangement in a Dining Room  
Section 1. Previous Seating Arrangement

TABLE 1	TABLE 2	TABLE 3
Belle	Beth	Flora
Dorothy	Rose	Pearl
Angeline	May	Ida
		Evelyn
TABLE 4	TABLE 5	TABLE 6
Clarissa	Anna	Kathryn
Helen	Harriet	Lena
Gladys	Grace	Ellen
	Edith	Mary

TABLE A—SECTION 2  
Choice Analysis\*  
Individual Analysis of Reciprocated  
Choices

	Individual Analysis of Reciprocated Choices										Individual Analysis of Unreciprocated Choices													
	Outgoing										Incoming**													
	Firsts					Seconds					Thirds													
	1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3	1:0	2:0	3:0	1	2	3	4	5	1	2	3	4	5		
Belle	1	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	1	-		
May	1	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1		
Mary	-	-	-	-	1	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-		
Flora	-	1	-	-	-	-	-	-	-	-	1	1	1	-	-	-	1	-	-	-	-	1		
Lena	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-		
Dorothy	-	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-		
Kathryn	-	-	-	1	-	-	-	-	-	1	-	1	1	-	-	-	1	-	-	-	-	1		
Ida	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-		
Edith	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	1		
Beth	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-		
Ellen	-	-	-	1	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	1		
Anna	1	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-		
Helen	-	1	-	-	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1		
Evelyn	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-		
Angeline	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-		
Rose	1	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Harriet	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-		
Pearl	-	1	-	-	-	-	-	-	-	1	1	1	-	1	-	-	-	-	-	-	1	-		
Gladys	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-		
Clarissa	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-		
Grace	-	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	1	-		
Total	4	3	1	3	6	2	1	2	0	13	10	18	4	2	3	4	0	2	2	6	0	6	4	0
Total	-	8	-	-	11	-	-	3	-	41	-	-	-	13	-	-	10	-	-	-	-	18	-	

Note: The darker "1's" are used to indicate that these choices were satisfied in the placement.

Note: The darker "1's" are used to indicate that these choices were satisfied in the placement.

\*This is the analysis of the second testing of Cottage 2. See Table C, Section 2.

\*\*1, 2, 3, 4, 5, indicate the number of incoming choices, firsts, seconds, or thirds, which are unreciprocated by the person chosen.

TABLE A—SECTION 3  
SOCIOMETRIC FINDINGS

	No. of girls	Pct. of girls
Population 21		
Number of girls receiving in the test:		
3 reciprocated choices	3 or	14.3%
2 reciprocated choices	3 or	14.3%
1 reciprocated choice	7 or	33.3%
No mutual choice but chosen	1 or	4.8%
Isolated (unchosen)	7 or	33.3%
	21	100. %

TABLE A—SECTION 4  
PLACEMENT ANALYSIS

Population 21	
Number of girls receiving in the placement (at her table):	
One reciprocated choice (or more)	11* or 52%
Unreciprocated first choice (or more):	
No mutual choice but chosen in the test	1 or 5%
Isolated (unchosen in the test)	6 or 29%
Number of girls who receive "optimum"	18 or 86%
Of the remaining three girls,	
Number who received 2nd from optimum	1 or 5%
Number who received 3rd from optimum	2 or 9%
	21 100%

\*Twelve reciprocated choices were satisfied in the placement but one of these (Helen's) was not the girl's optimum choice.

TABLE A—SECTION 5  
NEW SEATING ARRANGEMENT

TABLE 1

Belle\*  
Anna\*  
Edith\*  
Harriet\*

TABLE 2

Helen\*\*\*  
Angeline\*  
Gladys\*

TABLE 3

Kathryn\*  
Pearl\*  
Grace\*\*  
Ida\*

TABLE 4

Flora\*  
Ellen\*  
Lena\*  
Evelyn\*

TABLE 5

Dorothy\*  
Mary\*  
Beth\*

TABLE 6

May\*  
Rose\*  
Clarissa\*\*\*

\*Denotes the individual is receiving optimum placement.

\*\*Denotes the individual is receiving 2nd choice from optimum.

\*\*\*Denotes the individual is receiving 3rd choice from optimum.

Note—Of the isolated girls all but one receives optimum placement.

TABLE B  
Efficiency of Placement Attained Through Sociometric Technique  
FIRST TEST

Cottage	Population	No. who could receive optimum placement without sociometric aid*	No. receiving optimum placement through sociometric aid**	Efficiency in placement	No. receiving no choice in placement
1	21	4	16	76%	0
2	24	4	17	71%	0
3	19	4	14	74%	1
4	21	6	18	86%	0
5	31	4	23	74%	1
6	29	10	24	83%	1
7	30	3	26	87%	0
8	26	4	23	88%	1
9	28	10	23	82%	0
10	38	4	38	100%	0
11	29	4	24	83%	2
12	27	6	24	88%	0
13	29	8	24	83%	0
14	25	8	21	84%	1
A	20	4	15	75%	0
B	17	6	13	77%	0
First Test	414	89	343	82%	7
Summary of					
Second Test	404	96	340	84%	7
Summary of					
Third Test	397	122	338	85%	4

\*Number who receive optimum spontaneously, a mutual first choice (1:1). They could be placed without sociometric aid.

\*\*The girls who receive second or third from optimum placement are not included in calculating efficiency, only those who receive optimum. See page 26-29.

These two simple rules guide each placement. As table A illustrates for a specific group, they can be called into effect with a high degree of efficiency. Even in instances in which a number of girls do not receive their optimum, they can receive their second very often.

This procedure has two phases: analysis of the choices and analysis of



placement. The analysis of choices discloses the structure of the group and the position of every girl within it. It discloses how many girls are wanted spontaneously by all three partners whom they want at their table, how many are wanted by two of the three partners whom they want at their table, how many are wanted by one of the three only, and how many by none of the three. It discloses the high percentage of girls who have to make some adjustment to the group because they cannot get what they want.

A technique of placement has been worked out to help the girls as far as possible where their spontaneous position in the group stops them in a blind alley. Their criss-cross affinities as charted in a sociogram are simple, direct guides which a technique of placement can intelligently use. The attempt is made to give every girl of the group an optimum of satisfaction. We consider as the optimum of satisfaction the duplication for a girl of such a position in the placement as is revealed to be the most desired by her in accordance with the actual structure presented in the sociogram. (See Table A for details of application to a specific group.)

The tabulation of placement is figured out. It indicates the seating which has been calculated for every cottage. (See Table B.)

We find that sometimes it is possible to be efficient up to 100%; on the average we are able to give an optimum of satisfaction to more than 80% of the girls. Considering that the percentage of girls who would reach this optimum if left to their own devices is on the average not higher than 25 to 30%, the help coming from sociometric technique of placement is substantial.

It is a matter of principle with us to give every girl the best possible placement regardless of what her record may be or what experience the housemother may have had in regard to any two girls who want to sit at the same table. We do not begin with prejudice but wait to see how their conduct turns out.\*

We have noted that the girls' own spontaneous choices may deadlock them in a certain position, and we can well visualize that they may be forced in actual life to make an adjustment which is very arbitrary and deeply against their wishes. These "deadlocks" are not something which every individual outgrows spontaneously, but are something which works like a social destiny

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\*Occasionally we see that two or more girls who have affinities for each other do not behave to advantage for themselves or for others. Then a different placement may be more desirable for them and this is based on findings as presented elsewhere. See *Who Shall Survive?*, chapters on Racial Quotient, Sex, and Psychological Home.

for the majority of individuals. It was therefore of great interest not only from a practical but also from a theoretical point of view to study whether the technique of placement would have for the girls a significance beyond the temporary aid it gives them. If, through our intermediation, they can mix during their meal times with girls who appeal to them and learn to choose better the next time, if the technique helps them to facilitate and train and improve their social spontaneity and to break the deadlock more rapidly than if left to their own devices, then the service of such a procedure may find many applications.

The sociometric test in regard to table choices is repeated every eight weeks. To estimate accurately the progress, or regression, or standstill of social interrelations, we have calculated the findings and made a comparative study. See Table C.

Table C presents the outcome of the test in three successive testings eight weeks apart, a period of twenty-four weeks. In the first test, of the 327 girls who participated, 23.9% succeeded in having their first choice reciprocated by a first choice (1:1); 11.9% succeeded in having their first choice reciprocated by a second choice (1:2); 10.4% succeeded in having their first choice reciprocated by a third choice (1:3). In the second test, of the 317 girls who participated, 27.1% succeeded in having their first choice reciprocated by a first choice; 15.1% succeeded in having their first choice reciprocated by a second choice; and 11.4% succeeded in having their first choice reciprocated by a third choice. The total success in the first test in getting a mutual choice of any sort in response to the first choice was for that population 46.2 per cent. The success in the second test, was for that population 53.6 per cent. The difference of 7.4% is the *increase* in the efficiency of the girls from the first to the second test in finding their first choices reciprocated *without* outside aid. The increase in efficiency from the first to the second test in regard to 1:1 mutual choices is 3.2%; in regard to 1:2 mutual choices it is also 3.2%; and in regard to 1:3 mutual choices it is 1 per cent. In other words, the increase in efficiency shows up most in the 1:1 and 1:2 choices but is less noticeable in the 1:3 choices. In regard to second choices, the increase in efficiency is 10.6%, and for the third choices, 1.4 per cent. The total increase in mutual choices is 19.4% from the first test to the second test.

In consequence of this increase in responses to first choices, there is a corresponding decrease from the first to the second test in outgoing choices which remain unreciprocated, a decrease of 19.4 per cent.

TABLE C—SECTION 1  
Analysis of Table Choices of the Cottage Populations  
First Test—5 Weeks Later

Cottage***	Popu- lation	RECIPROCATED CHOICES*										UNRECIPROCATED CHOICES**								
		First		Second		Thirds						Total		Firsts		Seconds		Thirds		Total
		1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3	1:0	2:0	3:0	1:0	2:0	3:0				
1	21	4	4	4	4	4	3	4	3	4	34	9	10	10	29					
2	24	4	3	3	3	2	1	3	1	4	24	14	18	16	48					
4	21	6	2	0	2	2	2	0	2	4	20	13	15	15	43					
5	31	4	3	3	3	4	0	3	0	4	24	21	24	24	69					
6	29	10	3	5	3	2	5	5	5	0	38	11	19	19	49					
8	26	4	2	2	2	2	3	2	3	4	24	18	19	17	54					
9	28	10	2	1	2	8	2	1	2	6	34	15	16	19	50					
11	29	4	3	5	3	4	2	5	2	4	32	17	20	18	55					
12	27	6	3	6	3	4	1	6	1	0	30	12	19	20	51					
13	29	8	5	1	5	4	3	1	3	8	38	15	17	17	49					
14	25	8	3	1	3	2	5	1	5	4	32	13	15	15	43					
A	20	4	4	2	4	4	3	2	3	2	28	10	9	13	32					
B	17	6	2	1	2	4	2	1	2	2	22	8	9	12	29					
Total	327	78	39	34	39	46	32	34	32	46	380	176	210	215	601					
Average		.239	.119	.104	.119	.141	.098	.104	.098	.141	1.16	.538	.642	.657	1.84					
Sum of Averages			.462			.358			.343		1.16		1.837		1.84					

\*1:1, indicates a subject's first choice is reciprocated by a first choice; 1:2, indicates a subject's first choice is reciprocated by a second choice; 1:3, indicates a subject's first choice is reciprocated by a third choice; 2:1, indicates a subject's second choice is reciprocated by a first choice; etc.

\*\*1:0, 2:0, 3:0, indicate first, second or third choices, respectively, which were not reciprocated.

\*\*\*Cottages 7 and 10 are omitted because they are not comparable, being larger in population and of a different race. Cottage 3 is omitted because many vocational assignments are such that few members are in the cottage for meals together.

TABLE C—SECTION 2  
Second Test—16 Weeks Later

Cottage	Popu- lation	RECIPROCATED CHOICES							UNRECIPROCATED CHOICES						
		1:1	1:2	First 1:3	2:1	2:2	2:3	3:1	3:2	Thirds 3:3	Total	Firsts 1:0	Seconds 2:0	Thirds 3:0	Total
1	20	4	7	4	7	2	1	4	1	2	32	5	10	13	28
2	21	4	3	1	3	6	2	1	2	0	22	13	10	18	41
4	18	4	4	0	4	2	3	0	3	0	20	10	9	15	34
5	31	6	6	3	6	2	4	3	4	6	40	16	19	18	53
6	30	10	3	1	3	4	4	1	4	2	32	16	19	23	58
8	25	6	3	5	3	4	3	5	3	0	32	11	15	17	43
9	28	14	2	2	2	8	4	2	4	6	44	10	14	16	40
11	28	4	3	6	3	4	3	6	3	0	32	15	18	19	52
12	26	4	3	2	3	6	1	2	1	4	26	17	16	19	52
13	27	8	6	1	6	4	6	1	6	6	44	12	11	14	37
14	26	8	3	5	3	6	4	5	4	2	40	10	13	15	38
A	19	10	3	3	3	6	5	3	5	6	44	3	5	5	13
B	18	4	2	3	2	2	3	3	3	0	22	9	11	12	32
Total	317	86	48	36	48	56	43	36	43	34	430	147	170	204	521
Average		.271	.151	.114	.151	.177	.136	.114	.136	.107	1.36	.464	.536	.643	1.64
Sum of Averages			.536			.464			.357		1.36		1.643		1.64

TABLE C—SECTION 3  
Third Test—24 Weeks Later

Cottage	Popu- lation	RECIPROCATED CHOICES										UNRECIPROCATED CHOICES				
		First										Thirds				
		1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3	Total	Firsts	Seconds	Thirds	Total	Total
1	16	6	4	2	4	2	1	2	1	0	22	4	9	13	26	
2	24	8	2	0	2	0	1	0	1	4	18	14	21	19	54	
4	22	10	4	1	4	4	0	1	0	2	26	7	14	19	40	
5	28	8	4	3	4	2	2	3	2	4	32	13	20	19	52	
6	31	14	4	1	4	8	2	1	2	4	40	12	17	24	53	
8	25	4	5	4	5	0	1	4	1	0	24	12	19	20	51	
9	23	8	3	4	3	2	4	4	4	6	38	8	14	9	31	
11	29	2	1	2	1	2	6	2	6	0	22	24	20	21	65	
12	23	12	1	1	1	4	2	1	2	2	26	9	16	18	43	
13	28	8	1	1	1	2	5	1	5	4	28	18	20	18	56	
14	25	8	5	0	5	2	4	0	4	0	28	12	14	21	47	
A	19	10	4	4	4	8	1	4	1	4	40	1	6	10	17	
B	19	8	4	4	4	2	2	4	2	2	32	3	11	11	25	
Total	312	106	42	27	42	38	31	27	31	32	376	137	201	222	560	
Average		.340	.135	.087	.135	.122	.099	.087	.099	.103	1.21	.438	.644	.711	1.79	
Sum of Averages		.562				.356			.289		1.21		1.793		1.79	



TABLE D

Comparative study of table choices with average difference between the findings of successive tests when the tests are given at intervals of eight weeks, with choices put into operation immediately after each choosing.\*

	Popu- lation	Reciprocated Choices									To- Unreciprocated				To- tal
		1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	tal	1:0	2:0	3:0	
1st Test:															
Sum	327	78	39	34	39	46	32	34	32	46	380	176	210	215	601
Average		.239	.119	.104	.119	.141	.098	.104	.098	.141	1.16	.538	.642	.657	1.84
Sum of Averages			.462			.358			.343		1.16		1.84		1.84
2nd Test:															
Sum	317	86	48	36	48	56	43	36	43	34	430	147	170	204	521
Average		.271	.151	.114	.151	.177	.136	.114	.136	.107	1.36	.464	.536	.643	1.64
Sum of Averages			.536			.464			.357		1.36		1.64		1.64
3rd Test:															
Sum	312	106	42	27	42	38	31	27	31	32	376	137	201	222	560
Average		.340	.135	.087	.135	.122	.099	.087	.099	.103	1.21	.438	.644	.711	1.79
Sum of Averages			.562			.356			.289		1.21		1.79		1.79
Difference Between Averages in 1st and 2nd Tests		.032	.032	.010	.032	.036	.038	.010	.038	-.034	.194	-.074	-.106	-.014	-.194
Difference Between Averages in 2nd and 3rd Tests		.069	-.016	-.027	.016	.055	.037	-.027	-.037	-.004	-.150	-.026	.108	.068	.150
Difference Between Averages in 1st and 3rd Tests		.101	.016	-.017	.016	-.019	.001	-.017	.001	-.038	.044	-.100	.002	.054	-.044

\*For routine purposes we have carried totals to the 3rd decimal place, but it was not considered wise at this time to apply the more complex statistical methods such as the computation of critical ratios.

When we examine the findings of the third testing, we see the amount of mutuality of first choices still increasing, 2.6% more than in the second test, but a falling off for second and third choices. What this means is the accumulation of benefit going to the first choices, as we see when we examine the number of unreciprocated first choices in the first testing, 53.8%, and number in the third testing, 43.8%, a difference of 10 per cent. See Table D.

To see whether these choices are being more broadly spread throughout the various cottage groups we calculated the percentage of isolated girls in each group for each period. For the first period the isolated girls are 17.6% of the total number, and for the third period, 14.8%, a decrease of 2.8 per cent.

The question is whether the findings in this period of twenty-four weeks presents a significant trend. This question cannot be answered except through further testing. It appears reasonable to assume that the placement technique should increase the spontaneous efficiency of choosing. The procedure brings a number of isolated girls into contact with popular girls who under normal circumstances may not pay any attention to them. The unchosen girl sitting beside her favorite has an opportunity to show herself to better advantage and to win the person she wants as a friend. Similar relationships of all sorts develop through our "shuffle", which lays the ground open for potential clickings to take place. Without the use of this placement technique the girls who know each other well get to know each other still better and the newcomers tend to be excluded.

A *control series* of tests given at intervals of six weeks over a period of eighteen weeks to one cottage, with a population of 22 girls at the time of the first testing and 23 at the time of the third testing, is reported in Table E.

The placement procedure was not allowed to go into effect during this period. The findings indicate a continuous fall in the mutuality of choices—for first choices a decrease of 10.3%; for second choices, 14.2%; and for third choices, 31.9%—together with a continuous rise in unreciprocated choices amounting to 56.4 per cent. While this is a very small group, it suggests the needs for sociometric placement technique and supports the trends mentioned above.

A problem which often recurs is that sometimes girls remain over to whom no satisfaction can be given in the placement. In placing a population of 412 girls on the basis of the first testing reported here, only seven girls (or 1.7% of the population) received none of their three choices.

TABLE E  
Sociometric Control study with average difference between the findings of successive tests when the tests are given at intervals of eight weeks, with choices not put into operation.\*

	Popu- lation	Reciprocated Choices										Unreciprocated Choices			
		First					Seconds					First		Sec- onds	
		1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Total	1-0	2-0	3-0	Total
Sum	22	6	1	1	1	2	3	1	3	4	22	14	16	14	44
Average		.273	.0454	.0454	.045	.091	.136	.045	.136	.182	1.000	.636	.727	.636	2.000
Sum of Averages			.364			.273			.363		1.000		2.000		
Sum	23	6	0	2	0	4	0	2	0	2	16	15	19	19	53
Average		.261	0	.087	0	.174	0	.087	0	.087	.696	.652	.826	.826	2.304
Sum of Averages			.348			.174			.174		.696		2.304		
Sum	23	5	0	1	2	1	0	1	0	0	10	17	20	22	59
Average		.217	0	.044	.087	.044	0	.044	0	0	.436	.739	.869	.956	2.564
Sum of Averages			.261			.131			.044		.436		2.564		
Difference Between Averages of:															
First and Second Tests			-.016			-.099			-.189		-.304		.304		
Second and Third Tests			-.087			-.043			-.130		-.260		.260		
First and Third Tests			-.103			-.142			-.319		-.564		.564		

\*For routine purposes we have carried totals to the 3rd decimal place, but it was not considered wise at this time to apply the more complex statistical methods such as the computation of critical ratios.

(In the second testing, 1.7%, and in the third testing, 1% of the population received none of their three choices.) To these seven girls individually an explanation is given that to give them any one of their choices would block the choices of a great many other girls in the cottage; they are asked to accept the situation with the understanding that at the next choosing (8 weeks later) if it is necessary that any girl go without her choices for the sake of the majority of the girls, other girls than they will be asked to do so. The girls are told who these girls are who want to sit with them but whom they did not choose. They are glad to find themselves thus chosen, and take with a good spirit the placement they are asked to accept. They render a service to less well adjusted and little chosen or isolated girls who choose them.

The argument may be raised that it matters very little with whom a girl sits at the table. The question whom one has at his table during meal time may rightly seem so very insignificant to a person who lives in a great city and has the opportunity to mix freely with everyone and has plenty of time at his disposal. But in an institutional community where the number of acquaintances one can make is strictly limited, and where a certain amount of routine is necessary, free association during meal time with the person you desire to be with is of great social value. We have made similar observations in the dining rooms and dormitories of colleges.

Another argument may be raised that for most people what they eat is more important than with whom they eat. This is partial truth which is valueless as long as it remains unqualified by quantitative analysis. Our social atom studies showed that there are people in whom the preferential feelings toward other *persons* are especially articulate and that there are people in whom the preferential feelings toward *things* are especially articulate. This we have observed frequently also in our placement studies. We found here and there girls who craved to sit at a table where they know the waitress is in the habit of giving special favors.

Another argument may be raised that a popular and perhaps superior girl, although she may have received one or two of her choices, may have to tolerate as a third partner an isolated girl whose choice she but whom she violently rejects. In reply to this it can be said that the popular girl, exposed to chance, may not have received even the two friends whom she wanted; also it may be an important part of her training to expand her emotional experience also toward people who do not appeal to her so much

as others. An increase in emotional flexibility should not decrease her preferential sensibility.

Sociometric techniques of placement overcome the lack of system which is seen in the picking of roommates generally, especially in colleges. A haphazard procedure appears satisfactory to the individuals who associate themselves readily, but it is totally inefficient for the majority of those who have a hard time to find the partner they want. The following explains the technique as applied to colleges.

Let us suppose that the whole student population is 240, and that their dormitory arrangements are such that to each bedroom are assigned two students. Each student is given three choices. The choices are analyzed and charted. Sixty students, let us say, form first choice mutual pairs. They are eliminated from the contest. The remainder of one hundred and eighty are called to a second meeting. They go through the same process. This time, let us say, one hundred and twenty students form first choice mutual pairs. They are then eliminated. The remainder of sixty students are called to a further meeting. They go through the process again. Should still some of the students remain unchosen, these are called to a further meeting, and so forth, until everybody has found a partner.

In this variation of our placement procedure, the "adjuster" is eliminated. He doesn't interfere; he does not make any suggestion beyond stating the actual findings. He states the positive findings, the pairs formed. He does not state the negative findings. The adjuster here is merely a charter. He gives information beyond stating the pairs only when he is asked to do so. One or another student who did not succeed in receiving his partner may want to know what his position is in the group. He may find, for instance, that although his first and second choice remain unreciprocated, he is chosen first by two and second by three students to whom he had paid little attention. This may urge him to think more clearly about his relation to his co-students and also prepare him better for the next shuffle. The charting is repeated, of course, after each meeting.

This variation of sociometric technique seems a happy combination of complete *laissez-faire* and of placement aid. Information or aid is only given if a student asks for it. Otherwise it is withheld. The same procedure can be used in every type of group.



## REGROUPING AND RETRAINING OF KEY INDIVIDUALS\*

The spontaneity of the choice process can become deteriorated to a degree that the natural process of regrouping takes a pathological turn or comes to an apparently incorrigible, dead end. Sociometric tests executed in prisons and reformatories\*\* revealed that the highest number of choices were regularly given to individuals who had made an outstanding record in anti-social activities (as sexual delinquents, thieves, burglars, etc.) and that individuals who had reformed or wished to reform remained unchosen or were rejected by the majority. It became clear to sociometrists that unless this process could be reversed, the introduction of the values cherished in the outside community would be an impossible task. As a solution to this dilemma, as demonstrated in *Who Shall Survive?*, regrouping and retraining of individuals have to go hand in hand. Regrouping and retraining of key individuals became a *conditio sine qua non*, especially in communities where the process of regrouping had come to a comparative standstill. Dr. Bruno Solby reported that "the leaders selected in the cottages are usually the serious 'problem cases.' As leaders of the cottages, these girls have a bad influence upon the other inmates. . . . The problem is this: Will we be able to develop new leaders? Will we be able to change the sociometric configuration of the cottages?\*\*\* As these key individuals already in a position of power were non-cooperative and deceitful, efforts made with their retraining had to be abandoned in many cases. It was the retraining of the *non* leader, the sociometric isolate, or the potential leader who is found sociometrically rejected, which offered a methodical alternative. The individual to be retrained was first placed in a series of situations and roles in which he portrayed on the psychodrama stage the experiences which ultimately landed him in prison, and second a series of situations and roles which brought about a craving for reorientation of values and a desire to reform. As soon as the diagnostic facts about him were established a program of retraining could be formulated. The situations and the roles for retraining were selected from the community in which he lived at the time, situations which were crucial in the reformatory and which determined the influence he could exercise upon others. The retraining was carried out in a group, all the individuals who appeared to be sensitive, potential material, forming

\*This concluding chapter and the general discussion have been added here; they did not appear in the original article.

\*\*The Westfield Farms, Department of Correction, N. Y.

\*\*\*See *Sociometry*, Volume 2, Number 2, April 1939, page 108.

it. Parallel with their retraining sociometric tests were given at regular intervals. It was possible to discover changes in structure, the isolates and rejected ones ascending gradually to better sociometric positions, the former key individuals losing in status and moving towards the periphery positions in the sociogram.

#### GENERAL DISCUSSION

We sociometrists have frequently pointed out that sociometric principles have been used intuitively by practical statesmen and political leaders without any knowledge of sociometry as a method for social investigation. A topical example is the phenomenon of the *quisling*. The quisling fulfills a function in the group which is of sociometric significance. On the surface it seems that the quislings are merely individuals who are in sympathy with the nazi system of values. It seems logical therefore that they would be chosen as nazi representatives. However, in the communities into which the nazis entered in their victorious march were many more individuals than the chosen ones who sympathized with the nazi system. The question is: what made the individuals actually selected for the role of quisling particularly fit for the task? It is interesting to note that the nazis, as if endowed with a keen sense for sociometric verities, chose individuals who were often comparatively political nonentities, disliked and rejected by the regular members of the community. The choice of the quisling is therefore justified from the point of view of sociometric effects. The regular burghers in Norway, the Netherlands or Belgium would have been unwilling to cooperate with the nazi rulers and therefore were unsafe associates. In the reformatories above we had a similar problem to face, although in reverse. The psychological power was in the hands of the irregulars, the persistent deviates and chronic delinquents. It is among the isolated and rejected ones that we occasionally found an individual who wanted to reform. Just as the nazis, although for opposite reasons, we turned to the powerless and rejected idealists in the group. What the quislings and they have in common is the *same sociometric status*.

There is another current problem which sociometric studies as presented in this article can elucidate. Allied Armies are now entering German communities which are entirely or largely indoctrinated by nazi principles and sentiments. Is there any sociometric or psycho-dramatic instrument available which could be used in an effort to change their attitude? Every effort is faced with an iron set of roles cast to order. Every sociogram of these communities would probably show a persistency of psychosocial

structure from retest to retest. But the quisling technique can be reversed. There may be in every German community a number of individuals, Germans who crave for a style of living in total contrast with that of the nazis. Men who have lived in hiding, in contact with underground groups, but who might appear in a sociogram as non-leaders, isolated and rejected. It is with the aid of such men that a rejuvenation of the German community could begin.

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## SOCIOMETRIC MEASUREMENT AND CHANCE

JOAN HENNING CRISWELL  
*San Antonio, Texas*

In sociometric research two problems of statistical analysis emerge. The first is the development of formulas expressing the intensity with which a given phenomenon occurs. Such formulas would include those denoting the degree of coherence present in a social group, the amount of intersexual or interracial cleavage, or the degree of influence attained by a given individual. The second task is that of testing the statistical significance of the results obtained. This is of course distinct from the first objective since, for example, a high index of coherence might occur in a group having too few members or making too few choices to yield reliable results. As sociometric experimentation develops, an increasing number of different formulas will undoubtedly be devised for the solution of these problems of measurement.

In *Statistics of Social Configurations*<sup>1</sup> Moreno and Jennings made the first and basic contribution toward answering both of the previously mentioned questions. For purposes of this statistical analysis the experimental units were seven comparable groups each of 26 subjects making 3 choices apiece. Each group had received the same sociometric test. In order to measure the coherence of group structure the experimenters first predicted the frequency with which each sociometric phenomenon would occur if it were due, not to the preferences of the individual choosers, but to the operation of chance factors alone. Thus they predicted the number of choices which each member of a group of 26 would receive by chance, and the chance numbers of mutual pairs and unreciprocated choices that would occur in each experimental unit. The theoretical formulas for such prediction were then computed and tested by comparison of their predictions with actual chance distributions of choices which Moreno and Jennings obtained by drawing ballots from a shuffling apparatus.<sup>2</sup>

The frequency distribution of choice which Moreno and Jennings obtained by drawing ballots at random was plotted on the same chart with the theoretical distribution which Lazarsfeld predicted by an expansion of the appropriate binominal, and the deviation of the distribution of ballots from the theoretical values was tested by the application of chi square.

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<sup>1</sup>J. L. Moreno and Helen H. Jennings, "Statistics of Social Configurations," *Sociometry*, Vol. 1, Nos. 3 and 4, January-April, 1938. See also *Sociometry Monograph* No. 3, Beacon House, New York, 1944.

<sup>2</sup>*Ibid.*, pp. 349-51.

This test indicated that the discrepancies between the two distributions were such as to be accounted for by chance factors. Such a test could also have been applied to determine the significance of the deviations existing between the theoretical distribution and the distribution of choices actually made by the seven experimental groups of subjects. Such use of the chi-square test offers a beginning in the testing of sociometric results for statistical significance.

Measures of group coherence were then obtained by comparing obtained frequencies with chance frequencies. For example, it was reported that the average number of mutual pairs per experimental group was 213% in excess of the average number in the seven chance distributions of ballots; the frequency of isolates was 250% greater in the experimental than in the ballot distributions. The chance frequencies used were in all cases those occurring in the ballot distributions, not those predicted from theoretical formulas. As Bronfenbrenner<sup>3</sup> has pointed out, to employ in such measures chance frequencies based on formula is less laborious than to use frequencies obtained by drawing ballots at random. Moreover, values based on ballot distributions will vary slightly with the chance variations of the distributions. In such measures it is therefore an improvement to substitute formula predictions for ballot drawing. These ratios of experimental to chance results show promise of eventually yielding a scale of measurement of group integration.

In research on race cleavage between Negro and white school children by the writer<sup>4</sup> a problem of chief importance was to derive a mathematical expression for the intensity with which a given racial group preferred its own members to members of the other race. It was necessary that this expression produce measures comparable for different populations to which the same sociometric test was given, even though these populations varied in size and in the percentage of each race present. It was also necessary that the measure of approach toward one's own race be interchangeable with the measure of withdrawal from the other race, since acceptance of one of two groups should logically have the same strength as rejection of the other.

The basic principle of the method used was the comparison of the

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<sup>3</sup>Bronfenbrenner, Urie, "A Constant Frame of Reference for Sociometric Research," *Sociometry*, Vol. VI, No. 4, November 1943, p. 372. See also *Sociometry Monograph* No. 6, Beacon House, New York, 1945.

<sup>4</sup>Criswell, Joan Henning, "A Sociometric Study of Race Cleavage in the Classroom," *Archives of Psychology*, No. 235, January 1939, p. 19.



numbers of choices actually made with the numbers which would be expected if race preference were absent and chance alone determined the amount of interracial selection. It was, however, impossible to make this comparison simply by subtracting the percentage of intraracial or interracial choices made by a given race from the percentage which would be expected on a chance basis, since by such a method non-comparable results would be obtained from groups of different racial composition. For example, in one group whites might be expected to give 20% of their selections to whites; in another containing a white majority whites might on a chance basis be expected to direct 80% of their choices to whites. If each of these white memberships produced 10% more intraracial selections than expected, the two figures would obviously not be comparable, because related to different bases. A ratio instead of a subtraction method was therefore used.

In order to take account of all selections made by each race, both interracial and intraracial choices, the chance expression used was the ratio between the expected number of intraracial choices and the expected number of interracial ones. The corresponding figure based on experimental results would be the ratio between the numbers of intraracial and interracial selections actually made. Dividing the obtained ratio by the chance ratio produced an index of self-preference for any specified racial membership.

It might be thought simpler at this point to substitute for the double ratio just stated, a single ratio between the number of intraracial choices made and the number expected. It was found, however, that such a single ratio did not yield interchangeable values for acceptance of one's own group and rejection of the other. That is, the ratio between number of interracial choices obtained experimentally and number expected by chance was not the reciprocal of the corresponding ratio based entirely on intraracial choices. In the case of the double ratio the criterion of interchangeability of measures of acceptance and rejection is satisfied, since the measure of a group's preference for another group over itself is the obtained ratio of interracial to intraracial choice divided by the chance value. This is of course the reciprocal of the self-preference ratio; thus acceptance and rejection measures of equal intensity are yielded.<sup>5</sup>

In deriving the index of preference the expected distribution of choices

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<sup>5</sup>Criswell, Joan Henning, "Sociometric Methods of Measuring Group Preferences," *Sociometry*, Vol. VI, No. 4, November 1943, pp. 400-401.

is determined on the basis of the numbers of persons in each group of the test population under consideration. In a population of  $N$  numbers, consisting of groups 1 and 2 having  $a_1$  and  $a_2$  members respectively, the probability that a member of group 1 will make an in-group choice (choose a

person in his own group) is equal to  $\frac{a_1 - 1}{N - 1}$ . The probability that he

will make an out-group choice (choose an individual in group 2) is equal to  $\frac{N - a_1}{N - 1}$ . The subtraction of 1 is made in the preceding expressions because an individual cannot choose himself.

If group 1 makes a total of  $t$  choices, then  $\frac{t(a_1 - 1)}{N - 1}$  is the number

of expected in-group choices, and  $\frac{t(N - a_1)}{N - 1}$  is the number of expected out-

group choices. Dividing the first expression by the second we obtain for group 1 the chance ratio of in-group to out-group choice:

$$E = \frac{a_1 - 1}{N - a_1}$$

Group 2's equation is of course obtained in the same manner, substituting  $a_2$  for  $a_1$ .

Similarly, if there are in the population several groups having  $a_1, a_2, a_3$ , etc. members, the  $E$  formula used in measuring the amount by which, for instance, group 1 prefers itself to group 2 is:

$$E = \frac{a_1 - 1}{a_2}$$

For determining by how much any membership, *e.g.*, group 1, prefers group 2 to group 3, the  $E$  formula would be:

$$E = \frac{a_2}{a_3}$$

To calculate the obtained ratio for the first two of the above cases the experimenter determines the number of choices group 1 actually directed toward itself and divides this figure by the number of choices actually given to the other group in question. In the third case group 1's choices to group 2 are divided by group 1's choices to group 3. The obtained ratio is then in each case divided by the corresponding  $E$  value to give the pref-

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erence index. An index greater than 1.00 would denote preference for the group represented in the upper term of the corresponding  $E$  ratio; a value of less than 1.00 would indicate that the membership represented in the lower term was preferred.

This double-ratio method can be used for any situation involving two or more groups, for example, memberships of different sex, different nationality, or different religion. It was applied by the writer for measuring self preference of Negroes, whites, and also of various groups classed according to sex or skin color. The ratio may be applied regardless of whether the number of choices made by the subject is limited by the experimenter or is uncontrolled.

In order to test the statistical significance of the results the distribution of choice experimentally obtained was compared with the expected distribution by a routine application of the chi-square test. Tables showing the application of the test to populations broken up into two or more groups are given in the writer's monograph already cited, on race cleavage in the classroom. In the same study the test was also applied to determine whether choice motivations given during individual interviews were present in numbers significantly different from chance expectation.

The chi-square test is a simple method of testing the significance of sociometric results, provided that numbers are big enough so that each cell frequency is reasonably large. Although populations studied sociometrically are often so small that cell frequencies of 10 or less may occur in the analysis of any one group, several populations of the same type may easily be combined statistically for the application of the technique.

Bronfenbrenner's formulas<sup>6</sup> for measuring group cleavage, presented in a recent article, are as far as they go identical with the earlier work of the author. Like the writer, he based choice probabilities on the numbers of individuals in each group of a population. Thus he found that in a population of  $N$  members divided into two groups of  $a$  and  $b$  members the probability that a person in group  $a$  will choose a person in group  $b$  is equal to

$\frac{b}{N-1}$  and the probability that a member of group  $b$  will choose an indi-

vidual in group  $a$  is equal to  $\frac{a}{N-1}$ . He did not, however, carry his analy-

<sup>6</sup>Bronfenbrenner, Urie, "A Constant Frame of Reference for Sociometric Research," *Sociometry*, Vol. VI, No. 4, November 1943, p. 384. See also *Sociometry Monograph* No. 6, Beacon House, New York, 1945.

sis to the point of developing a measure of the intensity of group preference.

We have already mentioned the use of chi square in the Moreno-Jennings article and later by the author for the purpose of testing for statistical significance the discrepancies between actually obtained frequencies of sociometric phenomena and frequencies occurring by chance. For such tests Bronfenbrenner has chosen a different technique, the Carver Type III Function method, which employs the expansion of the appropriate binomial. Since this method is less well known than the chi-square test, it will be summarized briefly.

In predicting the theoretical choice distributions to be compared with the Moreno and Jennings ballot distributions, use was made of the expansion of the binomial,  $(q + p)^n$ , since the successive terms of this expansion will give the probability that a person will be chosen 0, 1, 2, 3, . . .  $n$  times. The term corresponding to a given frequency of choice, added to all the preceding terms, gives the probability of obtaining by chance that number of choices or fewer.

In using this method the experimenter works out the appropriate expressions for  $p$ , the probability that a choice of a designated kind will occur,  $q$ , the probability that such a choice will not occur, and  $n$ , the number of times that such a choice has an opportunity to be made. The most probable chance frequency yielded by a binomial distribution is of course the mean value,  $M = np$ , and this mean is therefore the prediction formula for the average number of choices which a group member may receive by chance or for the number of choices of a specified kind (e.g., reciprocated choices or out-group choices) which may be expected in a given group. The formulas contained in the original article by Moreno and Jennings, for the chance numbers of mutual pairs or of unreciprocated choices, as well as Criswell's and Bronfenbrenner's formulas for expected numbers of in-group or of out-group choices, are the means of appropriate binomial distributions.

For each obtained frequency Bronfenbrenner therefore used the corresponding sum of the terms of the binomial expansion to determine the likelihood of obtaining such a frequency by chance.<sup>7</sup> Since actually working out such a sum for each frequency would be a laborious task, he employed an approximation to this sum. After examining various methods of obtaining approximate values (approximating by means of Stirling's formula, the normal probability curve, the Poisson distribution, the Incomplete

<sup>7</sup>Bronfenbrenner, Urie, *op. cit.*, pp. 372-380.

Beta Function, or the Gram-Charlier Series) he chose as most appropriate Carver's approximation by means of the Type III Function.

In the latter method a calculation is first made of the mean, standard deviation, and skewness of the binomial distribution used. Each obtained frequency is then expressed as a deviation from the binomial mean and is divided by the binomial standard deviation. Thus expressed in standard units it is considered as an abscissal value under a Pearson Type III curve of suitable skewness. The corresponding area under the curve can then be read from appropriate tables. Bronfenbrenner recommends Salvosa's tables as most convenient.<sup>8</sup> From these tables can be read directly the probability of chance occurrence of a given deviation from the binomial mean. A probability of less than 5 in 100 would ordinarily indicate that the observed discrepancy could not be attributed to chance.

It will be noted that for many sociometric situations it is equally possible to use either the chi-square test or the foregoing technique. In an experiment in which a certain distribution of choices is predicted and the problem is to determine whether the obtained distribution departs significantly from the expected one, either of the two methods could be employed. Such situations are those in which for example the numbers of reciprocated and unreciprocated choices or the numbers of in-group and out-group choices are predicted on a chance basis and then compared with experimental results.

The Type III Function method has so far proved of special value sociometrically in determining whether the number of choices received by a given child is significantly high or low. Bronfenbrenner defined "stars" as those individuals receiving significantly more than the chance number of choices expected per individual and "neglectees" as those receiving significantly less than the chance number.<sup>9</sup> Thus each person's deviation from expectation was evaluated by reference to Salvosa's tables and only those for whose deviation the probability of chance occurrence was significantly low were considered "stars" or "neglectees." This technique provides an objective definition of these deviates.

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<sup>8</sup>Salvosa, L. R., "Tables for Statisticians," Ann Arbor, Michigan, Edwards Brothers, Inc., no date.

<sup>9</sup>Bronfenbrenner, Urie, "A Constant Frame of Reference for Sociometric Research. Part II. Experiment and Inference," *Sociometry*, Vol. VII, No. 1, February 1944, pp. 54-58, 70, 75. See also *Sociometry Monograph* No. 6, Beacon House, New York. 1945.



# A SURVEY OF SOCIOMETRIC AND PRE-SOCIOMETRIC LITERATURE ON FRIENDSHIP AND SOCIAL ACCEPTANCE AMONG CHILDREN

ESTHER B. FRANKEL AND REVA POTASHIN  
*University of Toronto*

## *Introduction*

Although numerous studies have been made of the general development of social behaviour, specific research in interpersonal relations—particularly social acceptance and friendship—has been undertaken only recently. Interest in the topic is derived from:—

- a) The growth of clinical work and mental hygiene.
- b) The growth of social psychology and the development of group work.

It is generally assumed that lack of friends, and/or a low degree of acceptance by one's contemporaries, indicates some inadequacy in the personality development of the individual.

In an effort to isolate the factors related to social inadequacy, investigators have approached acceptance, friendship, and general social relations from divergent viewpoints and with different methods. The present paper is a survey of methods employed and the information gained from studies in this field.

## *I. Methods of Studying Social Relationships*

### *1) Observational Techniques.*

The early studies in child development were concerned primarily with developing valid and reliable methods of observing social behaviour, and only secondly with observing children's contacts. In attempting to overcome the limitations of diary records and rating scales, the time-sampling method of observation was developed. In its original form the method was introduced by Olson (39) in studying nervous traits in children. It was then adapted and extended by Parten (40), Goodenough (17), Beaver (3), Loomis (26), Arrington (1, 2), and Bott (6, 7, 8), for observing various aspects of social behaviour manifested by nursery school children.

The majority of time-sampling techniques described by Arrington (2) conform to a general pattern. The individual members of the group are observed in rotation for a specified number of short samples of uniform length over a period of time. In this way the observer can record the fre-

quency and type of contacts initiated and received, and their duration within the short time interval.

Most of the early studies using time-sampling techniques were interested in the social behaviour of the child rather than in his acceptance as a member of the group. Recent studies have given more attention to acceptance, one form of which is observed in friendship. Challman (11) in determining companionships of preschool children, has used a variation of the usual time-sampling method. The variation consists in having the observer check at regular intervals, over a period of time, the names of children forming social groups. Although this method does not permit the observer to note the initiation of contacts, it provides a series of photographic pictures of all the groupings at a given moment. It was used by both Challman (11) and Hagman (19) to measure the strength of friendship relationships existing among preschool children.

Challman's use of this method of determining friendships is subject to the following criticism. Although the observations are made in the "free-choice" play situation, there is some adult direction which encourages certain groupings and discourages others. In addition, two children may be observed together frequently, not because they want to be with each other but perhaps because they are interested in the same play material. Challman admits that this is the most serious source of error in observation. He goes on to say that though it is not possible to ascertain definitely whether two children enjoying the same activity are attracted by the activity or by the presence of the other child, we may infer that the associates are more important if the same group engages in a variety of activities at different times.

In studies of general social acceptance, that is the acceptance of an individual by his contemporaries, the observational methods have also been used. F. B. Moreno (29) studied the spontaneous play contacts of nursery school children and from her data ascertained the relative acceptance of each child in the group.

## 2) Verbal Choice Techniques.

To discover the existence of friendship and acceptance, many studies have used one or more of three types of verbal choice methods.

### a) Simple verbal choice

The experimenter asks each subject to name his friends. From the re-

ports thus obtained, the pairs of friends are selected. (Walker (48)). Occasionally mutuality of this choice is taken into account.

The objectivity of this approach is difficult to estimate. The situation for the subject (either child or adult) is not always clear or real. The individual may be responding to the word "friend", and not to the life facts which it is meant to represent. (Korzybski (23)).

#### b) Paired Comparisons

Koch (22) and Lippitt (24) used Thurstone's method of paired comparisons to determine the popularity or acceptance among a group of nursery school children. The name of each child was paired with that of every other child. The subject is required to state which child in each pair he likes best. Popularity scores are then computed on the basis of the number of times a child has been chosen.

This method may be criticized since it requires so much time that the child may become bored or fatigued. In addition in the same way as the simple verbal choice technique, the method does not constitute a realistic choice for the subject. Koch admits that though popularity scores correlated  $+ .76$  with teacher's judgments of popularity, the children's choices were seriously affected by the position error.

#### c) The Sociometric Test

The sociometric method, devised by Moreno (31), overcomes many of the difficulties inherent in the foregoing methods. The test consists in having each member of a group, choose from all the other members, those with whom he prefers to associate in specific situations.

Moreno first used the test to analyze social groupings in a public school (30) and applied it later to a group of girls in a training school. The results were supplemented by diagrammatic representations.

In order to estimate the individual's social acceptance relative to that of the other members in the group, Northway (33) has added a method of scoring the choices. She has used target diagrams to show graphically the relative position of subjects and the direction of their choices (34). Acceptance scores obtained by her and others show a wide distribution. This indicates that each child makes a relatively weak association with almost every other and has only one or two strong friendships.

The sociometric method has been adapted for use in other situations—Criswell (13), Bonney (4, 5), Loeb (25) and Sandin (45) in the grade school, Northway (33) in the summer camp, and F. B. Moreno (27) in the

nursery schools—in attempts to determine the factors creating different social positions. Bronfenbrenner (9) and Loeb have shown the high reliability and validity of the sociometric test with grade school children. In several studies reported by Northway (33, 35), the social acceptance scores of nursery school children were found to be relatively consistent over a period of four months. Jennings (21) has made use of this method in studying the extremes of the scale of social recognition—leadership and isolation. Lundberg (28) and Cologne (12) have adapted the sociometric method to the community problems, Loomis (12) to agricultural settlements and Dodd (14) to public opinion polls.

In studying the companionships of nursery school children, Hagman devised a questioning technique similar to that of Moreno. She compared the answers obtained with observed play contacts and concluded that the one could not be taken as an accurate index of the other and that the questioning technique is of little value in determining the child's companionships.

Two studies have used both the observational and sociometric methods. Hagman's study of companionships has already been discussed. F. B. Moreno found that children having the greatest number of initiated contacts with one child make the greatest number of choices for the same child in the verbal tests. Her results agree with those of the Toronto studies in showing that children of nursery school age develop a significant social status which is based primarily on the earliest interpersonal relations as they emerge in spontaneous groupings.

Some of the earlier sociometric studies have recognized the presence of reciprocation, but have not studied it intensively as a particular social relationship. A further use of the sociometric test might therefore be, the selection of friends on the basis of mutual reciprocation.

## II. *Methods of Studying the Nature of Social Relationships*

### 1) Experimental Techniques.

In order to understand the nature of any social relationship it is important to study it in action. The difficulties inherent in observing a social relationship within a larger group, make it advisable to abstract it from the wider setting and observe it in isolation. Moreno (30, 31), Murphy (32), Hagman (19), and Gregory (18) have created experimental situations to investigate the interpersonal behaviour of two individuals.

The subjects may be left together in a setting controlled by factors in the physical environment, *e.g.*, playpen, building blocks or books. Both Hagman and Gregory used this type of situation in studying the companion-

ships of nursery school children. Hagman noted that subjects reacted more to the children with whom they were most frequently observed in free play, than to the children of their least frequent contacts. Gregory's results suggest a dominant-submissive relationship between companions. Since these studies do not consider the fact of reciprocation, the results may be somewhat distorted.

### III. *Factors Associated with Social Relationships*

Studies of the past, irrespective of method, have been concerned with clarifying the factors which are instrumental in determining social acceptance and the formation of friendships. On the basis of which particular aspects of the total person are considered, they may be divided roughly among 3 classes.

a) Studies concerned with characteristics of physique and intelligence.

Williams (49), Furfey (16), Partridge (41), Pelletieri (42) and Walker (48) find I.Q., M.A., and C.A. to be important in determining the friendships of grade school children of the same sex. This agrees with Seagoe's (46) emphasis on mental and physical maturity in the formation of friendships.

In the nursery school however, both Challman and Hagman find M.A., I.Q., and physical factors insignificant in the choice of companions. Whether this disparity arises out of the actual developmental process, the varying limits of the range of choice, or the difference in methods employed, can not be stated definitely here. Challman (11) and Parten (40) suggest that children over 4 tend to associate with members of their own sex but this is contradicted by Bott (6). Northway in reviewing Budden's investigation of nursery school children remarks "age may be a term which obscures the real factors which affect sociometric ratings. Younger children who have been at school a shorter time and are learning the folkways, mores, and laws of life, have not yet developed the active techniques or language for dealing with social intercourse" (37).

b) Studies concerned with environmental or sociological factors.

In most studies concerned with this aspect, propinquity in terms of neighbourhood, group membership, school grade, etc., is stressed as *the* most important factor influencing children's friendships. This may be noted in the work of Furfey (16), Seagoe (46), and Walker (48) while Pelletieri (42) reports a decrease in importance of this factor as children grow older.

General socio-economic background also plays a part in the creation



of friendships, according to Jenkins (20) and Flemming (15). This factor is closely related to propinquity and to the tendency noted by Hagman and Bott (8) for nursery age children to choose play companions with whom they have some association outside school.

c) Studies concerned with personality characteristics.

Williams (49) asked his subjects to state their reasons for choosing a particular person as a friend; Moreno for choosing or not choosing certain persons in specific situations (30). Characteristics such as fun, fairness and sportsmanship were emphasized indicating the importance of personality factors in general in attracting and maintaining friendships.

Likenesses between friends in personal characteristics of athletic ability, courtesy, and cleanliness (Seagoe), in results on the Bernreuter Personality Inventory (Van Dyne, 47) seemed more important than differences. But Pintner, Forlano and Freedman (43) found only a low correlation between friends in grades 5 to 8 on objective tests of cultural attitudes, character sketches and personality outlines. This variation from the general trend of results may be due to the nature of the test or to the size of the group. <sup>③</sup> age level, too

Challman also emphasizes the likeness between friends through observation of personality traits of nursery school children. A similar trend is indicated in adult friends in results on objective tests of personality. Flemming (15), Cattell (10) and in attitudes and opinions Winslow (50), Richardson (44).

With nursery school children, extroversion, attractiveness of personality and laughter do not appear to have a significant relationship with companionship as studied by Challman and Hagman. Koch's results indicate a positive correlation of popularity scores with a tendency to ask for commendation, to tattle and to respect property rights (22).

Northway (36) has reported several studies which indicate factors associated with acceptance. In her comparative study, no single trait or consistent behaviour pattern seemed to be associated with acceptance. Possession of a skill influenced acceptability for the activity in which the skill was used, although skills in themselves were not important in general acceptance.

Griffin, Laycock and Line found that all the children in grade schools whom they had rated as shy had low acceptance scores but that not all the children with low scores were shy.

Loeb (25) found that children who were least acceptable to their age-mates could be divided into two groups: a) quiet, reserved children and b) aggressive or "problem" children. Her results also showed that children

whose rank in achievement (school grades) was above their rank in ability (I.Q.) were significantly higher in social acceptability.

Bott (6) had noted that "the (nursery school) child who is active toward others is the one who received the most from them. The shy retiring child on the other hand, is little noticed by the group." Her work also suggested that the best adjusted children were found in the upper group (having many companions), whereas certain children who presented distinct behaviour difficulties were in the lowest group (having few friends).

On the basis of these studies, Northway has formulated the hypothesis that a child's social acceptance is related to the degree and direction of his outgoing energy. Bonney (5) likewise suggests that the child who is able to make his personality felt in the group has a better chance of being well-accepted than the one who perhaps has no offending personality traits but is "characterized chiefly by negative virtues."

#### *Conclusions*

Although no statement can be made regarding the usefulness of the methods and the validity of the findings of the studies of social relationships the following suggestions may be made. They were of value to the authors in developing their own research.

1) The value of any one of the methods developed in studying acceptance has not been adequately clarified for use in every situation. Although the high reliability of the sociometric test in grade schools and other situations has been indicated (by Moreno, Criswell, Jennings, Bronfenbrenner and Loeb) its applicability to younger and older subjects has not been thoroughly investigated. Frankel has evaluated the time-sampling method and the sociometric test in the nursery school situation.\*

2) Early research in friendship stresses likenesses and differences between friends. This may serve to define the broad limits within which the relationship may occur. However, it does not clarify the more intimate factors influencing the establishment of a friendship or show what the relationship in action is like. Potashin has investigated these particular aspects of friendship in grade school children.\*

3) In most of the studies in acceptance, the interest has been directed to children at the lower portion of the scale. The shy recessive children in this group have received particular attention (Northway). Similarly Jen-

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\*Frankel, *A Study of Methods of Measuring and Factors Associated with Social Relationships of Nursery School Children*. To be published at a later date.

\*Potashin, *A Study of Social Relationships among Grade School Children: Friends and Non-Friends*. To be published at a later date.

nings has selected for study one group in the upper portion of the scale—the leaders. More information is required about other groups at the extremes as well as children in the middle range.

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## PSYCHODRAMATIC RESEARCH PROJECT ON COMMODITIES AS INTERSOCIAL MEDIA

ERNEST DICHTER

*New York City*

It is planned to study people's attitudes toward commodities like cigarettes, cars, food, etc., with the means of the psychodramatic stage.

Up to now people's relation to everyday commodities have only been studied through questionnaire methods and statistical tabulation of their answers. This technique, known as market research, produces extremely interesting information but it cannot cope adequately with the complicated psychological mechanism that is set in motion every time we buy, select and use a product.

Every buying act is a highly dramatic event, full of spontaneity and emotion. A representation of this act on the stage under controlled conditions should prove a new tool for observing people's relation to products in all their subtle details.

Each observation and analysis of spontaneous behaviour presents an unequalled opportunity for the advertiser, propagandist, etc., to learn and understand the reactions and the mind of the prospective customer and recipient of his publicity. New appeals to be used in advertising should emerge from such psychodramatic studies. The Social Psychologist on the other hand would find an occasion to develop general principles about the socio-psychological function of commodities in a man's life.

Every product we buy is at first strange to us, we have to warm up to it, get to know it better until after a while it becomes a part of our personality. So much so that the array of tangible possessions of a man is often a valuable clue to the understanding of his personality.

We are convinced that these psychodramatic performances where products would serve as co-actors, would reveal important psychological factors in the interrelation between personality and the world of objects and the role of commodities as intersocial media.

*Facilities needed:* the stage itself—actual merchandise or commodities, depending on what our research proves to be best, and a few auxiliary egos.

All other problems as to detailed procedure, etc., could best be answered by just getting started and developing the scientific strategy as we go along with the research project.

## RESEARCH NOTE ON THE NEGATIVE VALUE OF SOCIOMETRIC TESTS IN COOPERATIVE GROUP FORMATION

HENRIK F. INFELD

*Rural Settlement Institute, Poughkeepsie, N. Y.*

An experiment in cooperative group formation with German refugees in New York City has been conducted but it did not get beyond the exploratory stage. Proceeding according to Moreno's advice, "to look at the project of a new community strictly from the point of view of the population which is going to fill it," an intensive examination of the applicants was made as the necessary first step.

The use to which the sociometric test has been put in the present experiment of group formation has proved helpful. The most valuable insight gained was that into the significance of objective methods of rejection of prospective co-settlers. In our experiment a *negative* application of the sociometric test helped to demonstrate to those conducting the experiment as well as to the applicants the *futility* of the given attempt. The cooperative project was abandoned.

Status of study: new experiments are planned.

## FACTORS IN SOCIAL CLEAVAGE AMONG COLLEGE STUDENTS

HARRY MANUEL SHULMAN AND GERHARDT SAENGER

*College of the City of New York*

A study of social cleavage among college students is being conducted under the auspices of the Social Research Laboratory of the Department of Sociology. The cosmopolitan character of the City College student body affords a testing out of the social conditions affecting cross-cultural relations of a student group engaged in higher education. The extent to which socio-economic status, race, creed and nationality determine and limit primary social contacts as measured by friendships, and the degree to which cultural isolation is correlated with personal isolation are objectives of the study. Attention is being given to factors in association that act as facilitators and inhibitors of cross-cultural contact. The instrument used consists of a schedule, anonymously filled out by informants, which describes the informant's friendship circle in terms of intimacy, manner of initial contact, and interests which maintain the friendship ties.

Status of study: Material collected, and in process of analysis.

## BOOK REVIEW

*Personality and Social Change.* By Theodore M. Newcomb. New York: Dryden Press, 1943. Pp. 225. \$2.50.

Ever since *Who Shall Survive?*\* appeared in 1934, it has been known that influence upon people does not emerge from the blue, like magical, unaccountable, unpredictable events, but is directly traceable to the specific avenues of the networks and in which the persons individually are link-participants established by inter-personal response. These networks must exist wherever human beings are in association with one another. The influence is not of one individual upon all the other individuals or of all the individuals upon all the individuals but the specific product of specific interaction between specific individuals. And many of the "spaces" between those present are, for purposes of influence, blank. The *results* of activity along these networks appeared to be magic because, until the advent of sociometric testing there did not exist any technique whereby they could be directly uncovered and charted in the setting in which they were operative.

Newcomb's contribution is not that of showing that these networks carry influence, for this has long been acknowledged; his contribution consists in disclosing that, *compared with other factors* which had been assumed to be powerful agents, the interpersonal and network bonds between persons are by far the greatest force for altering attitudes.

In the first intensive, long-range study of influences bearing on attitude changes in a community, Newcomb finds that the specific social relationships of the individual appear as the factors important for prediction. Courses of study appear only slightly related to changes in attitude. His results show, moreover, that attitudes representative of the dominant trends of thought in the community are closely tied up with the kind and direction of social relationships developed in the community and that from the relationship thus disclosed the emergence of leadership can be predicted. Social attitudes hence appear as an important component in inter-personal relationships.

This study is also notable because it is the first to demonstrate that even near-sociometric data, *i.e.*, data given by the individual on the basis of hypothetical criteria which are not to be experienced by him and hence "unreal" data not to be used to alter the individual's situation, reveal crucial

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\*J. L. Moreno, *Who Shall Survive?*, New York, Beacon House, 1934.

information about a community when secured under circumstances which enlist the cooperation of the population as a whole. Newcomb used hypothetical choices and "votes" to arrive at such relationships in the Bennington College community; the conditions of his investigation, however, make it appear likely that such near-sociometric data would correlate highly with sociometric data since there is overwhelmingly consistent evidence that the subjects were in this instance deeply motivated by interest in the project itself. Such cooperation, founded upon interest *extrinsic* to the test itself, may be difficult if not impossible to secure, except in extraordinary circumstances, and particularly when the investigation demands several retests of the same population. It would be worth while to establish for inter-personal data what degree of correlation ordinarily exists between sociometric and near-sociometric data secured from the *same* population.

Newcomb states that he was late in realizing what great implications for attitudinal change sociometric data would yield and that is why he relegated the securing of such data to a minor part of his experimental set-up (not routinely securing them) and used near-sociometric methods when he was in a position to use genuine sociometric methods which would have held intrinsic motivation for his subjects. Yet such was the rapport between Newcomb and his students that apparently they cooperated, simply on the basis of being asked to do so and knowing the results were to be confidential, *as if* he had carried out direct sociometric testing. To the author are extended our compliments—though he took an unnecessarily devious route he got there just the same. In the opinion of this reviewer, however, *Personality and Social Change* would bring still greater enlightenment on the questions it set out to answer if full-fledged sociometric methods had been used and followed by thorough analysis of the results.

In a few pages the author briefs his study of the attitudinal life histories of all the members of a closely-knit student community over a full four year period. From every one of a group of 250 students for four consecutive years, he obtained attitude scores—something of an achievement. He also obtained mailed responses from 82% of all students who had spent more than two years in the college, as much as three years after their departure—also no mean achievement. But such data provide only the beginning; it is the variety of evidence the author brings to bear concerning the individual's position in the community which gives them meaning. It is a study, in short, of the total-community influences upon all of its component individuals. As such, it is unique.

There is found a notable degree of change from generally conservative

positions on the part of these mainly upper-class women students. Perhaps the most striking illustration of this is the fact that in the 1936 elections 62% of all freshmen voted for the Republican candidate, 29% for the Democratic, and 9% for the Socialist or Communist, whereas of juniors and seniors 15% voted Republican, 54% Democratic, and 30% Socialist or Communist. Similar freshmen-senior differences were noted during each of the four years, most of them being measured by Likert-type scales. But the author does not stress the magnitude of attitude change, nor does he seem particularly concerned as to why this general trend occurs. It is simply accepted as a raw dictum; the problem is to account for variation in the direction and degree of community pulls upon individuals.

Here the novel features of the study begin. Though only one of the techniques is new, the degree of plotting attitude scores against data concerning the individual's position in the community in such comprehensive manner is quite unprecedented. Four procedures are employed:

1. Near-sociometric scores of community status. (The writer calls the tests he used "Moreno-type" but they do not vary from those Moreno calls "near-sociometric.") There is a clear and consistent line of relationship, in two consecutive years, between frequency of choices received and non-conservatism. Conspicuous leaders, with hardly an exception, have extreme attitudes of non-conservatism.
2. Guess-who nominations (made by a cross-section sample of raters) of individuals conspicuous for various kinds of community participation of insulation. With a few carefully noted exceptions, those considered all-out community enthusiasts have non-conservative attitudes, and those considered withdrawn from or antagonistic to the community-at-large are conservative.
3. Self-estimates of own attitude as compared with assumed majority attitudes of individuals own college class. (This is a new device, and one which the author relies heavily, as noted below.) Majorities of all classes consider freshmen more conservative than upper-class students, who in turn are considered more conservative than faculty. The general awareness of the community pull is shown by the fact that nearly all freshmen consider themselves less conservative than the majority, while most juniors and seniors estimate themselves as more conservative than most of their class-mates.
4. Semi-standardized interviews with all members of these consecutive graduating classes, 140 in all, representing all seniors whose attitudinal careers had been followed two or more years. Favored by the familiarity



of long acquaintance in a small community, the author evidently developed extremely good professor-student relations. Seniors were first asked about the over-all impact of their college experience. Then, following some questions on attitudes toward changing attitudes, they were asked to state their own attitudinal position relative to their classmates. (There were almost no cases of disagreement between this response and that obtained by objective means, as outlined just above.) At this point they were shown the record of all their attitude scores since they had begun to participate in the experiment—scores (filed by code numbers) which they had never seen before. The remainder of the interview consisted of a joint attempt to account for these scores. These latter excursions often included a good deal of pre-college history, the aspirations and fears with which they had come to college.

All but the last of these procedures involved completely objective measures, stated in numerical scores. A good deal of supplementary information was obtained from college records, including rather full personality data submitted by counselors, the college psychiatrist, and others. These, too, are treated fairly objectively, by culling adjectives repeated with certain frequencies, etc.

From all these data the author builds up his central concept of community role. By objective role he means reputation (as measured by the guess-who nominations) for community reputation. By subjective role he means the individual's self-estimates of his own attitude position relative to that of the class majority.

These concepts are applied to two groups chosen for intensive student: the least conservative and the most conservative thirds of the two classes for whom fullest data covering three or four years) were available. Each group is divided into two according to objective role: conservatives are labeled negativistic and non-negativistic, according to guess-who scores; non-conservatives are similarly labeled cooperative and non-cooperative. Each of these four groups is then divided again according to an index of awareness of agreement with own class majority, so that about half of each of the four groups is considered "aware" and half "unaware."

Eight groups having been thus established by objective criteria, the records are combed for personality data. No fool-proof methods were available here, and the author probably slips into some generalizations which might not be sustained by independent perusal of all the data. But in most cases the various sources—adjectives used by counselors, interview statements, and objective data—support each other fairly convincingly.

Community roles, as thus defined, the author finds are closely related to the processes by which attitudes are developed. Objective roles are apparently assigned by others on the basis of observed behaviors; and among those assigned similar objective roles, different subjective roles are self-assigned, on the basis of other personality characteristics. Those for whom both kinds of roles are similar, according to the measure, might be expected to have at least some personality characteristics in common. The author gives evidence that such is the case. What is more significant, these common characteristics are directly related to the processes by which attitudes are acquired.

For example, among conservative juniors and seniors reputed to be negativistic toward the community, about half are fairly clearly aware of their own physical attitudes, while the others are quite oblivious of their minority position. A considerable body of personality data about these ten individuals documents the following difference between the two groups: the "awares" had experienced a good deal of pre-college success, hoped to be college leaders, failed, and turned against college-approved values. As one of them put it, "The community won't accept me, and so I reject it, and what it stands for." The "unawares" are in marked contrast. They came to college with neither a history of nor hopes for social success; they developed a "defensive" isolationism and the community as such passed them by. They never rejected the dominant community attitudes, like the "awares," and it is possible they scarcely sensed them. Degree of awareness appears, for both groups, to be a cue to important factors in attitude formation.

Four or five equally conservative juniors and seniors, reputedly non-negativistic and aware of their relative conservatism, are paired with a like number who believe themselves attitudinally typical. These "awares" include the only conservatives who can boast of much personal prestige; they resemble the non-conservative college leaders, except that they, by retaining their conservatism, have consciously avoided a break with their parents. As one of them explains, "I'd only have to revert to conservatism on leaving here for home, so why bother?" The non-negativistic "unawares," however, are passive individuals whose friendships are limited to small circles assumed to be typical of the college; the community aspects of the college pass them by. "It wouldn't occur to me to think of public affairs in relation to the college," says one of them; "I think of them, rather, in connection with . . . my father." Again, the fact of awareness or unawareness is important in understanding how attitudes are arrived at.

The non-conservatives, too, are divided into those aware of and those

unaware of the relative extremeness of their own attitudes. Among those reputedly cooperative (the college leaders), the "awares" have openly faced conflicts with their parents and have the sense of having "fought, bled and died" for attitudes which have become genuinely their own. Their awareness is at once an outcome of the hard-won struggle (its "scar"), and doubtless a symptom of a personal security which permits them knowingly to go beyond the majority position. The "unawares" are described as enthusiastic, eager to please, and dependent upon instructors. The latter traits have brought them close to assumed faculty attitudes without their realizing that they have gone much beyond the majority of their classmates. Had they realized it, as several of them said, they would have retreated to less extreme positions.

Again, the major difference between the "aware" and the "unaware" juniors and seniors, who are not reputed to be particularly cooperative, points to fundamentally different motivations in the development of the same attitudes. The former apparently arrive at their non-conservatism as an act of excelling, the latter as a means of conforming. The "awares" are considered highly independent, and have set their hearts on success in intellectual areas: "Being intelligent necessarily involves giving up conservative ideas, though most students become less conservative on a very superficial basis." The "unawares" are a group who had come to college with no high ambitions, either social or intellectual, but who achieved modest success in one or both areas, beyond their expectations. Their resulting eagerness, like that of the "unaware" cooperative group above, led them to over-conform without realizing it. They differ from this latter group chiefly in never having developed aspirations of leadership. "Acquiring tolerant, liberal attitudes goes along with . . . being a good citizen."

The significance of such findings may be estimated as considerable. With the exception of Moreno's work, the main sociological use of the term role has been hardly above a figure-of-speech level. Newcomb's use of "role," however, limited his definition, and means of exploring it is at least given a measurable definition. He avoids the question as to whether roles should be thought of as self-assigned or other-assigned by measuring both directions with equal objectivity. The device of plotting subjective against objective roles demonstrates the interdependence of private and public factors in attitude development. Private motives may have an infinite variety of personal-historical origins but in a given community the variety of modes by which they are likely to be canalized into social attitudes is not endless. Whatever private and idiosyncratic factors are found to be

involved in an individual's development of a social attitude, group standards impose limits within which he finds modes of attitudinal expression. It follows that differing sets of group standards result in diverse sets of possible patterning of attitudes.

*Personality and Social Change* makes a scientific contribution in a further sense, and one which has great implications for overcoming such enormous problems as that of racial prejudice. The major factor in attitude change is disclosed to be the kind and direction of social relationships the individual develops in the community—inter-personal bonds clearly appear to carry the portent—and not what classroom lectures are attended or what books are consumed. Thus, some degree of positive inter-personal response is evidently minimal if communication (necessary to change of attitude) is to take place—or apparently the listener does not “get it” to the extent of altering his point of view and subsequent conduct accordingly.

HELEN H. JENNINGS  
*Sociometric Institute*  
Washington, D. C.

## ANNOUNCEMENTS

### *In regard to the formation of the American Sociometric Association*

We are indebted to Raymond E. Bassett, John R. P. French, Ronald Lippitt and J. L. Moreno for the following felicitous phrasing of thoughts which sociometrists have felt and indicated on many occasions.

It has been gratifying to note the nation-wide response to the call for the formation of a sociometric society. The significance of such a society becomes clear if one checks the list of applicants for charter membership. They are not limited to one department of social science but all departments are represented. There are social biologists, anthropologists, sociologists, psychologists, psychiatrists, psychodramatists, educators, social workers and even physicists among them. It appears that in the search for a common matrix of all social sciences sociometric theory and spontaneity theory begin to take a rank of first magnitude. This is so perhaps because sociometry is, more than any other social methodology, directed towards the furtherance of cooperation among people working on the same or similar problems, in different fields. There is a need for interchange of ideas among men in different departments. The sociologist needs to know more about group psychotherapy, the sociometrist of the human group needs to know more about the sociometry of sub-human groups, the industrial psychologist needs to know more about role theory and role training, the psychiatrist about the sociometry of inter-personal relations, and so forth. The organization of a sociometric society should be flexible enough to attract people from different fields and to include both the productive worker and the participant spectator.

Observation of organized groups such as professional societies leads one to wonder if, in their conventional form, they have not become primarily agencies for establishing a hierarchy among their members. The purpose stated in the by-laws often gets no more than lip service in these instances. In sociometric terms, these societies consist of a nuclear group of officers and former officers who carry on practically all the activities. Interaction between these persons is frequent and usually friendly. Outside of this controlling and closely knit nucleus there may be individuals who are satellites of one or more of the leaders and they presumably are the majority of members who pay dues to support the society's activities, but take little part in them, either through their own geographical or financial inability, or through unwillingness of the leaders to have them.

The pattern of interaction, participation, and organization of profes-



sional societies has not, to our knowledge, been materially altered in the last eighty years or more. We believe the old technique does not give persons on the periphery much return for their dues. We also believe that it is possible to invent a pattern which will give those who don't hold office or get to distant meetings, some activity which will be of value to them and in no way harmful to the leaders in their efforts to coordinate and focus the activities of the society. It is our view that the first attempt should be directed towards creating bonds between persons on the periphery instead of limiting contacts to one direction only, namely inward towards the nuclear group.

A sociometric society should enable the researcher and teacher to work hand in hand with the operator and the practitioner. Nearly every conversation one has with a fellow social scientist points to the need for quite a different pattern of organization than the conventional type. The social psychologists are becoming increasingly dissatisfied with their professional lives, consisting of "closed systems" of contact with fellow scientists. They are demanding that mechanics be set up whereby they can associate with the social practitioner of society. In such a relationship they are finding that new incisive problems are thrown into bold relief from the field of action and, even more important from the point of view of the motivation of social scientists today, they find themselves in situations where they can have influence on social action through face-to-face relationships with "people who count" instead of reaching them through the vague uncertain route of academic research reports, read at meetings of the brethren or published in the journals of the brethren. In other words the primary reason, if not the only justification for a new association of social scientists would be to create a joint body of research and application, of study and action personnel, which will function to the mutual benefit of both. In such a challenge there would be social values, scientific fruits, a large membership and pioneering in the setting up of sociometric networks along which sociometric research would flow into a scientific way of life. The essential problem of communication between the scientist, the action leader and the general population would be tackled. We want an association where there is partnership between researchers and teachers and the other half who count most—those who are or should be putting sociometry into daily application—the citizen, the labor leader, personnel worker, group worker, school teacher, community organization worker, camp director or farm agent.

It is timely to point out again that the most important methodical principle which sociometry has emphasized is the systematic unification

of social research with social action. When it entered the field many years ago, the majority of sociologists, social psychologists and psychologists were devoting their time to the study of artificial *life-unlike* situations, to social relationships that existed in the experimental setting, but not in social reality itself. We began to insist, in word and deed, that the processes of exploration and operative action have to be synthesized into one method: that it focusses attention upon actual people, not upon abstractions of any sort, upon actual situations, like specific homes, schools, factories or communities, not upon abstracted and generalized situations, and upon situations in the present tense, not upon conjectures of past or future situations. The people who form the subjects of research are not used as guinea-pigs of some sort: it is their initiative, their spontaneity, their judgment and their decision which counts higher than anything else in the procedures applied in their behalf, the pertinent data about the human interrelations in a group cannot be found by one participant observer with any degree of certainty. The maximum possible certainty is, however, secured if every member of the group becomes a participant observer. There is an enormous virtue in the direct attack which distinguishes sociometry. It approaches every new situation in a concrete way, re-shaping its tools for each specific situation. What begins as something rigid because of its specificity and concreteness, gradually turns out to be the most flexible and articulate method imaginable. Since sociometry undertakes to comprehend and measure the world *as it is*, every human dimension is accepted and integrated by it into human society as a whole.

The influence of sociometry has increasingly sensitized social scientists to a deeper awareness of the problem of social immediacy. Group action studies of various kinds have been and are being made and the investigators have come *nearer and nearer* to being also the research actors in the situation itself. The research actors have come closer and closer to the participants, the people. The fact-finding processes become more valid, as soon as the workers go to the places where the facts originate.

To: *Applicants for Charter Membership in the (proposed)*  
*American Sociometric Association*

From: Temporary Organizing Committee

In Re: Next Steps in Organization.

Attached to this memorandum is the list of applicants for Charter Membership as of November 21, 1944.

As the plan is to form a society in accord with sociometric principles,

it would appear that the first step would be to select officers by the sociometric process.

On the basis of sociometric findings to date, populations of 100 require at least three choices to express adequately their psychological structure. Hence the Temporary Committee is asking the applicants for charter membership to make three choices for the offices of President, Secretary, and Treasurer.

The duties of these officers will be:

1. To formulate a constitution and by-laws for submission to the membership. These by-laws must include, in addition to the usual matters covered in such documents, such as membership dues and privileges, determination of criteria for membership which will reflect sociometric experience and also qualifications for assignment to various classes of membership which will be based on sociometric findings. An annual membership fee of \$4.00 is anticipated, which will include subscription to *SOCIOMETRY* for one year.

2. To think out ways of enabling all members, of all classes, to participate actively in the Association, and of making this participation constructive and fruitful both to the individuals and to the group.

After the Constitution and by-laws are adopted by the membership, the Association should apply for a charter as a membership corporation with an educational purpose, and upon the granting of the charter by the State in which application is made, new elections should be held in accordance with the provisions in the by-laws.

The first set of officers, whom you are now requested to choose, will therefore hold office from the period of their election until the first election held under the by-laws. It is estimated that this period will be about six months.

As the problems to be solved in the initial period of organization will require much thought and discussion, the Temporary Committee recommends that in addition to the three officers, three other persons be elected as counsellors, the six individuals to constitute the Executive Committee of the Association during the organizing period.

As soon as the first set of officers is elected, the Temporary Committee will dissolve.

Attached to this memorandum you will find a ballot, and an explanation of the method of scoring choices. Will you please return your ballots on or before February 15th, 1945?

Signed: HELEN JENNINGS  
JOAN CRISWELL  
MARIA ROGERS, *Chairman*

*Applicants for Charter Membership in the  
(Proposed) American Sociometric Association*

Raymond E. Bassett  
Gorham Normal School, Maine  
Howard Becker  
University of Wisconsin  
Louis Berman  
Gotham Hospital  
New York City  
Merl E. Bonney  
North Texas State Teachers College  
Muriel W. Brown  
U. S. Office of Education  
Washington, D. C.  
Eugene L. Burdick  
Palo Alto, California  
Ernest W. Burgess  
University of Chicago  
F. Stuart Chapin  
University of Minnesota  
John Collier  
U. S. Department of the Interior  
Washington, D. C.  
Rose Cologne  
State College, Pennsylvania  
Paul Cornyetz  
Psychodramatic Institute, N. Y.  
Carolyn Remington Craddock  
The American Red Cross  
Washington, D. C.  
Joan H. Criswell  
San Antonio, Texas  
Lewis A. Dexter  
University of Puerto Rico  
Ernest Dichter  
Columbia Broadcasting System  
Stuart C. Dodd  
American University of Beirut  
Wladimir G. Eliasberg  
New York City  
Paul R. Farnsworth  
Stanford University  
Lawrence K. Frank  
New York City  
J. G. Franz  
Ohio State University

Ruth Borden Franz  
Washington, D. C.  
Pearl Friedman  
Hempstead, N. Y.  
Bess Adams Garner  
Padua Hills Theatre, California  
Joseph B. Gittler  
Drake University  
Charlotte Louise Greene  
North Jersey Training School  
Margaret Wood Hagan  
The American Red Cross  
Washington, D. C.  
Frances Herriott  
Theatre for Psychodrama  
St. Elizabeth's Hospital, Washington, D. C.  
Charles E. Howell  
Northern Illinois State Teachers College  
Henrik F. Infield  
Rural Settlement Institute  
Foughkeepsie, N. Y.  
Mita Infield  
Poughkeepsie, N. Y.  
Ruth A. Inglis  
Commission on the Freedom of the  
Press, New York City  
Helen H. Jennings  
Sociometric Institute  
Washington, D. C.  
Leona M. Kerstetter  
New York University  
William H. Kilpatrick  
Columbia University  
Clyde Kluckhohn  
Peabody Museum  
Cambridge, Mass.  
Paul F. Lazarsfeld  
Columbia University  
Stephen Leeman  
Rural Cooperative Community  
New City, N. Y.  
Ronald Lippitt  
U. S. Office of Strategic Services  
Washington, D. C.

- Charles P. Loomis  
Michigan State College  
George A. Lundberg  
Bennington College  
Charles W. Margold  
New York City  
Florence B. Moreno  
Psychodramatic Institute  
Beacon, N. Y.  
J. L. Moreno  
Sociometric Institute  
New York City  
William L. Moreno  
Sociometric Institute  
New York City  
Samuel D. Morford  
Sheppard Field, Texas  
Jack S. Morrison  
Los Angeles, California  
Ernest R. Mowrer  
Northwestern University  
George P. Murdock  
Yale University  
Gardner Murphy  
College of the City of New York  
Henry A. Murray  
Harvard University  
Theodore M. Newcomb  
University of Michigan  
W. I. Newstetter  
University of Pittsburgh  
Mary L. Northway  
University of Toronto  
Talcott Parsons  
Harvard University  
Katharine Pease  
Briarcliff, N. Y.  
Harold A. Phelps  
St. Mary's College  
California  
Louise Price  
Brooklyn College, N. Y.  
Fritz Redl  
Wayne University  
Maria Rogers  
Committee on Autonomous Groups  
New York City
- Irwin T. Sanders  
University of Kentucky  
Theodore R. Sarbin  
Northwestern University  
Bertha Schauer  
Camp Edwards, Mass.  
Gerhard Schauer  
Camp Edwards, Mass.  
Clarence Schrag  
University of Washington at Seattle  
Nahum E. Shooabs  
Public School 157  
Brooklyn, N. Y.  
Harry M. Shulman  
College of the City of New York  
Mapheus Smith  
Selective Service System  
Washington, D. C.  
Bruno Solby  
U. S. Public Health Service  
Washington, D. C.  
Frank A. Stewart  
Washington, D. C.  
John Q. Stewart  
Princeton University  
Edward L. Thorndike  
Columbia University  
Myles Tierney  
Psychodramatic Institute  
New York City  
Zerka Toeman  
Psychodramatic Institute  
New York City  
Herbert A. Toops  
Ohio State University  
John Del Torto  
Psychodramatic Institute  
New York City  
Mary B. Treudley  
Wellesley College  
Anita M. Uhl  
Stanford University  
California  
Maryesther Wood  
Letterman General Hospital  
San Francisco, California



Alvin F. Zander  
U. S. Maritime Training Station  
St. Petersburg, Florida

Leslie D. Zeleny  
State Teachers College  
St. Cloud, Minnesota

SOCIOMETRIC TECHNIQUES OF ORGANIZATION  
AND  
EXPLANATION OF METHODS OF SCORING CHOICES FOR  
OFFICERS AND COUNSELLORS  
REGARDING THE FORMATION OF AN AMERICAN  
SOCIOMETRIC ASSOCIATION

The process of choosing and the method of scoring which is here outlined has been developed in the expectation that it will draw from the membership of the Association the most appropriate person for fulfilling the tasks of each particular office.

This first step in organizing a sociometric society is an open research in which all members of the society participate on equal terms. For administrative as well as research purposes it is important that each member respond to every phase of the ballot and supplement them with his own comments, suggestions, for supplementary procedures, more accurate scoring, and so forth. The development of this research project, which is at the same time a record of the growth of the society, will be reported in full, accompanied by charts, diagrams, and tabulations, in every issue of *SOCIOMETRY*. (Anonymity of members will be strictly preserved—names will be represented by a set of symbols.)

The rank, power or prestige value of a choice is not evaluated in this test. We know that the choice of an isolated individual has far less weight in the group than the choice of a key individual who is himself the center of a large number of choices, or the choice of an individual who, although not over-chosen in terms of the number of choices he receives, is yet considered a superior by key members of the group. Therefore, five choices made by five certain members for five other persons may have greater competence than fifteen choices made by members less competent to judge or with less influence in the group. This aspect of the choice process can not be separated from the various roles which the members are exercising in their communities and therefore it is difficult to evaluate without supplementary tests. Hence in this test it is disregarded.

Rejection of members for office is also not considered in this test.

## I. CHOICE ACCORDING TO INDIVIDUAL PREFERENCE

*Criteria*

The selection of choices will be based on the specific criteria for each office. From a President we expect: a) Leadership and initiative in directing the course of the society in accord with sociometric principles; b) Expert knowledge of sociometric methods and techniques.

From a Secretary we expect: a) Assistance to the individual members in their research projects and field work; b) Expert skill in sociometric statistics and in the tabulation of sociometric polls.

From a Treasurer we expect: a) Accounting of the income and expenditures of the society; b) Sociometric experience and counselling.

In the present stage of the organization of the proposed society, when by-laws must be written and precedents formulated for methods of procedure, the qualification of experienced sociometrist is of greater importance than any other of the qualifications for office mentioned.

*Scoring*

An officer is elected if chosen *first* by at least 60% of the incoming choices.

In case less than 60% of the first choices are given to any one member for a particular office, choices will be scored as follows: a first choice weighs four points, a second choice two points, a third choice one point.

According to this method, if member A receives fifty first and no second or third choices, he scores fifty times four, or two hundred points. If member B receives forty first choices, twenty second choices, and ten third choices, he scores forty times four, plus twenty times two, plus ten times one, or a total of two hundred and ten points. B would therefore be ahead of A in the poll.

Because of the premium placed on past sociometric experience at this stage of organization of the society, choices which a member receives for a higher office, should, if he is not elected, be credited to him for the next lower choice. For example, if C receives ten first choices, five second choices, and ten third choices for President, the total being sixty points, these will be added to the points he receives from the choices going to him for Secretary. If D receives five first choices and ten third choices for President (thirty points), ten first choices and ten third choices for Secretary (fifty points), the total of eighty points would be added to those he receives as a result of choices for Treasurer. Choices can not, however, be transferred in reverse order. That is, the choices which a member receives

as Treasurer can not be credited to him as Secretary or President, and the choices made for a member as Secretary can not be credited to him for President.

This kind of pooling together of choices may become less desirable when the basic structure of the Association is firmly established. Then other methods may be preferable.

## II. CHOICE ACCORDING TO TEAM PREFERENCE

### *Criteria*

The team choice is to be made independently of choices determined by individual capacity. This choice is to be made on specific team capacity. You may consider a certain individual as your first choice for a certain office because of his individual competence, but when you consider a team of officers you may prefer three individuals better suited to work together to accomplish the objectives of the Association, even though in your opinion none of them may equal in capacity to those you have chosen on the first test. Make your team choices independent of your individual choices.

The team members may consist of individuals who are not identical with any of the nine members whom you have already chosen for office when considering strictly individual factors. Or they may happen to be identical with certain of them for reasons of which you are the sole judge.

### *Scoring*

This second choice process influences scoring in the following manner: a team of three members is chosen to work as a unit. Every time a team is chosen by a member as a unit, a point is added to the score of each member of the unit. If a team of three, for instance, is chosen ten times as a unit, ten points are added to the individual choice score of each team member. These points are then added to the scores which these individuals have accumulated as a result of the first test for officers.

## III. CHOICE ACCORDING TO PREFERENCE FOR CO-WORKERS

### *Criteria*

If you should be chosen for any of the three officers, which two other members of the Association would you choose to work with you?

The results of this choice process will influence the final result in the following way. If the first two tests reveal a tie in the number of points

scored by two members competing for the same office, preference will be given to co-worker choices which are mutual or as nearly as possible reciprocal. For instance, if A, B, C, in one team, and D, E, F, in another should happen to score the same number of points, the team in which A chooses B, B chooses A, A chooses C and C chooses A, C chooses B and B chooses C, would be preferable to a team in which the reciprocity of choice is below this level.

Besides the three officers chosen as a result of scoring the three tests above, the three members who poll the second highest score for each office will be chosen as counsellors. The Executive Committee will consist of six persons.

## BALLOT

### I. CHOICE ACCORDING TO INDIVIDUAL PREFERENCE

I nominate the following nine persons for officers in the American Sociometric Association:

- |               |         |
|---------------|---------|
| For President | 1. .... |
|               | 2. .... |
|               | 3. .... |
| For Secretary | 1. .... |
|               | 2. .... |
|               | 3. .... |
| For Treasurer | 1. .... |
|               | 2. .... |
|               | 3. .... |

### II. CHOICE ACCORDING TO TEAM PREFERENCES

I nominate the following three persons to work as a team:

- |           |       |
|-----------|-------|
| President | ..... |
| Secretary | ..... |
| Treasurer | ..... |

### III. CHOICE ACCORDING TO PREFERENCE FOR CO-WORKERS

If I were chosen for any of the three offices I would choose the following members to work with me:

- |            |          |
|------------|----------|
| 1st choice | (1. .... |
|            | (2. .... |

- 2nd choice (1. ....  
 (2. ....  
 3rd choice (1. ....  
 (2. ....

I understand that the officers elected, together with three other members who poll the second highest score for each office, will constitute the Executive Committee of the Association with authority to submit proposed forms of organization, membership rules and other essential matters to the membership for ratification. I also understand that the Temporary Organizing Committee will score the ballots and announce the results of the election, and that immediately thereafter the officers and counsellors will take office and that the Temporary Organizing Committee will disband.

SIGNED.....  
 .....

#### *Sociometry of Subhuman Groups*

The February, 1945 issue will present this problem area with contributions from: Dr. H. S. Jennings, University of California at Los Angeles, Dr. W. C. Allee, University of Chicago, Dr. J. P. Scott, Wabash College, Dr. R. C. Carpenter, Pennsylvania State College, Dr. Clyde E. Keeler, Georgia Women's College, among others.

#### *Books Received*

Clyde Kluckhohn: "Navaho Witchcraft," Papers of the Peabody Museum of American Archaeology and Ethnology, 1944; Mischa Titiev: "Old Oraibi," Papers of the Peabody Museum of American Archaeology and Ethnology, 1944; Innes H. Pearse and Lucy H. Crocker: "The Peckham Experiment," George Allen & Unwin, Ltd., London, 1943; Harold F. Kaufman: "Prestige Classes in a New York Rural Community," Cornell University Agricultural Experiment Station, 1944; "The Problem of Changing Food Habits," Bulletin of the National Research Council, 1943; Harold E. Jones: "Development in Adolescence," D. Appleton-Century Company, Inc., 1943; Rachel Davis-DuBois: "Get Together Americans," Harper & Brothers, 1943; Lois Barclay Murphy and Henry Ladd: "Emotional Factors in Learning," Columbia University Press, 1944.



## MAN IS THE MEASURE . . .

READ BAIN  
*Oxford, Ohio*

*The Great Invasion.* The course of culture will not be greatly changed by the war. Soon the shell-shocked fields will thrive again and rubble give way to human habitation. Mankind will return to its prewar problems as men so often have crept back up the scorched slopes of Vesuvius. No millenium will dawn and utopian dreams will darken to disillusion. The slow struggle back and the hard trek forward will be resumed.

Roughly, we know what problems we must face in the next hundred years. Though we fail to abolish war in this generation, we still must deal with the problems that bedevilled us before we ran amok, before we became an armed camp and a nation with a third of a trillion dollar debt. Some of the more pressing of these problems are as follows: Negroes; Women; Capital-Labor; Political Organization; Conservation; Education; Health; Population.

In recent years, we have accumulated considerable scientific knowledge about population. Soon, we shall be faced with four alternatives: to increase the rate of population growth; let it become stationary; watch it decline; or do nothing. The population problem is rapidly becoming like the weather—everybody talks about it but nobody does anything. This is not because nothing can be done; it is because no consensus on population policy has emerged, either regarding quality or quantity. If a policy could be formulated and a mandate given, we know enough to effectuate any one of the first three alternatives mentioned above. Incidentally, we might control quality to some extent—if we knew what qualities we wanted. For the cost of a few battleships, say five a year for a generation, I would take a contract either to increase or decrease the rate of growth. It would be somewhat more difficult to hold it stationary, but even this might be approximated. Personally, I shall not worry much about the quantity of population until our total drops below 100,000,000. This would be enough decent Americans in a decent world. However, at present, the outlook is not bright either for decent Americans or a decent world. If our own and the world's folly forces us to adopt an insane imperialistic policy of "Breed and Bleed", we soon shall have to spend much money and whoop-la to reverse the present trend toward population decline.

Four large segments of our population are becoming increasingly heavy social and economic liabilities: women, Negroes, children, and the aged.

Women have lost much of their child-bearing and home-making function and are constantly becoming more ornamental and more parasitic. They occupy themselves with some new activities, to be sure, but most of them are busy-work, "culchah", and more or less genteel loafing. Some are being driven back into productive life from sheer boredom and economic necessity, but on the whole, they are willing to be cute and to ride without paying. Negroes apparently will become a larger proportion of the total population in the future, thus reversing a trend that has prevailed from 1790 to 1940. They are, and will continue to be, a large economic liability because of disproportionate crime, mortality, morbidity, poverty, and inefficient production until present economic, educational, political, and health discriminations are removed. Their birthrate will not decline until the depressant force of greater vertical mobility begins to operate. As children get fewer, they cost more. They receive more and more expensive medical, dental, recreational, clothing, housing, and educational care. Eventually, we shall have to put them to work, not only to offset their cost partially, but mainly to provide proper preparation for their adult functions: "All play and no work makes Jack unable to make jack", or "... makes Jack a jack—or part of one".

Thus, women and Negroes are potential economic assets which we are now beginning to use. Children can be made less costly by developing more rational values in child nurture and by making them as productive as sound child-rearing principles will permit. However, they probably will and should be relatively expensive up to age 20. They are "natural" dependents but they are not parasites in the sense that women, Negroes, and the aged are—but need not be.

In many respects, the aged are a much more serious problem than women and Negroes. All present trends point toward a gradual reduction of Negro and female social liability but the opposite is true of the aged. They are increasing both proportionately and numerically. The present trends in this respect are somewhat abnormal as we approach the end of the immigration cycle but there is some reason to believe that these trends will continue even after the immigration cycle is completed. In 1940, the expectancy at birth for white females and males was about 65 and 61; it was about ten years less for nonwhite. This gap certainly will be narrowed if not closed in the relatively near future, and, with the increasing number of Negroes, increased expectancy will increase the number living to 65 and older. So far, there has been only a slight increase in the expectancy of life for those who live to 65, but the fact remains that an even larger proportion of those born are living beyond 65. In 1940, about 7% were of this age; by 1980,

assuming low fertility, medium mortality, and no net immigration, more than 16% will be 65 or more. This is the Great Invasion—over 20,000,000 people above 65 in a population of about 135,000,000 by 1980. Other bases of prediction do not greatly modify these figures.

The economic and social liability of the aged begins long before 65. Increasing numbers of private and public employers will not hire men after 45 and some begin to fire or retire them at this age. Thus, the burden upon white males aged 20 to 45 becomes increasingly heavy. By 1980, there may be more people over 65 than under 20; in any case, these two classes will be close to 40% of the total population. It will require all the productive capacity of everybody aged 20-65, male and female, black and white, to maintain the high standards of living, both for producers and these two classes of dependents, to which we are being "educated" by our teachers, preachers, politicians, and advertisers.

Much of the 1980 population above 65 undoubtedly will be due to the aging of the immigrant population. Normally, we might expect this percentage to decline as we approach a population pyramid derived from our own natural increase but there is considerable likelihood that when the immigrant aged are all dead, our own aged will be replacing them in possibly even greater numbers. The pneumonias are serious killers of the aged but the sulfa drugs have greatly reduced these deaths in recent years. The results may and probably will be better in the future. Insulin has not yet registered its full effects. Other forms of endocrine therapy may increase our control over the diseases. The possibilities of penicillin are not yet known but they appear to be great. Gramicidin may add its effect. We seem to be entering a period of "miracle" drugs. Early diagnosis and treatment of cancer can greatly reduce this serious cause of old-age death. The enormous amount of basic cancer research may yield spectacular results at any moment. Cardiac-vascular diseases also may be partially controlled. It is known that many heart deaths of middle and old age have their origin in lesions of childhood and youth. The control of diseases of infancy and the contagions of youth may greatly reduce heart deaths above age 65. It is not known how the violent and straining athletic activities of adolescents may affect the heart. "Athlete's" heart may begin in adolescence or earlier rather than in college. It is even possible that children now under six will show lower heart mortality after 65 than the present generation. The elimination of venereal disease, especially syphilis, will reduce deaths from heart failure and cerebral softening. Proper diet and sound mental hygiene may greatly reduce hypertension, brain hemorrhage, embolism, and thrombosis.

There is increasing evidence that much cardio-vascular disease is psychosomatic though it is not known that such illness actually kills. It may do so indirectly if it produces chronic hypertension. The outlook is not bright for Bright's disease and other renal ailments but the reduction of systemic diseases, focal infections, and defective metabolism, plus improvement in dental and dietetic hygiene may greatly diminish kidney failure.

In addition, we must remember that the pathology of aging has not been attacked as extensively and intensively as the diseases of infancy and maturity have been. The discovery that protoplasm is "immortal", that aging is not "natural" and varies significantly with social class (occupation?), sex, and specific organs, may lead to revolutionary therapies for the "disease of old age". Gerontology, and especially psycho- and sociogeriatrics, is still in its infancy. As the proportion of the population above 65 increases, the medical, psychiatric, and sociological knowledge about old age will also increase and many new techniques of prevention and therapy may be developed. The more success we have in keeping people alive, the more serious the problem of the aged will become. Can we "assimilate" the hoary-headed millions who are descending upon us? Must they become an ever increasing burden to themselves and society? What can be done to reduce the menace of this Great Invasion of potential senile parasites?

At present, we are largely sociopsychotic about senescence. It is generally regarded as an inevitable and necessary evil—the young man's lifelong burden and fear. We pass meagre pension laws, push the aged aside and patronize them, herd them into unhomelike "homes"—we "honor" them, and call it a day. Recently, a leading School of Social Work announced a special course dealing with the problems of the aged. After two months, only one applicant had appeared. Old age is "hopeless"; only palliative help is provided; the cases are "carried" until they finally are closed by the cold hand of death and the clammy, costly hand of the undertaker.

Yet the case of the aged is by no means hopeless. It has been suggested above that the medical outlook is bright. The possibilities of social reorganization are also great. The development and application of scientific social knowledge may increase the homogeneity of our culture and thus reduce the tensions of life now produced by our sprawling, conflict-ridden, unintegrated civilization. If we can create an ideology and social system consistent with a science-based technology, we also may produce a race of men whose adjustment to life is normal, wholesome, and creative at all ages. A co-ordinated attack on aging by all the biological, psychological, and social sciences may transform the dark picture of the present time into a bright



blueprint for the future. Old age may become beautiful; life may improve with age like noble wine and masterly music; youth may excel in action, age, in reflection and wisdom. The twentieth century has been called "The Age of the Child"; the twenty-first may become "The Age of the Aged".

Some straws indicate the winds of culture are blowing in this direction. The cultural drift toward the conservation and utilization of the aged may become a powerful current. Ely becomes a father at 80; Dewey garners a lifetime of scholarship in those remarkable volumes written after he "retired". Goethe was past 80 when he finished *Faust*; Justice Holmes did some of his most distinguished work between 75 and 90; Stimson is still a good public servant as he approaches 80. Shaw, H. Ellis, Ford, Edison, W. I. Thomas, C. W. Eliot, N. M. Butler, G. W. Carver, Freud, Spencer, and many others, are and were going strong around the age of 80. May their tribe increase!

When the Age of the Aged is old enough to have a history, Dr. Lillian J. Martin will receive a forerunner's fame. In 1916, when she was 65, she started her Old Age Counselling Center in San Francisco; she died in active service at 92. Her prophetic vision and pioneer practice may become as great a landmark in the history of geriatrics as the work of Galileo is in the history of physical science. Read "Mental Decline and Its Retardation", by George Lawton, in the April 1944 *Scientific Monthly*.

The biological attack on old age is basic, the psychiatric preventive and therapeutic approach is fundamental, but both of these will be hamstrung unless the sociopathic aspects of the problem are treated adequately. We must honor old age by making it useful, enjoyable, exciting, and creative; we must honor it by works, not words; we must build a social system in which old age can play an effective and honored role. Pensions and "homes" must be replaced by real homes and real jobs with adequate compensation. Just as a sound society requires full-time, well-paid work for all women who are not rearing young children, and part-time jobs for all women whose youngest child is over six, so we must provide useful work for all employable people over 65. The work must be appropriate to their physical and mental abilities, but it must be *work*, not make-shift boondoggling; it must utilize all their available energy, experience, and capacities. We must find out what functions in our culture can be performed by them; full-time for some; part-time for others; some can be employed at physical labor; some at white-collar jobs—but all must work to the limit of their ability for as long as they are able. This is a basic condition for their personal welfare, for their physi-



cal and mental health, and will also be a great economic asset to the community.

Protoplasm, whether muscular or neural, is "healthy" only when it is maximumly stimulated and normally functioning. This concept of "normalcy" must include mental and social functioning as well as biological. Probably more human organisms and personalities die or decay from rust and rot and rest than from overstimulation and overexertion. It is possible to err in either direction, but the apathy of age is more often due to cessation of customary function than from biological breakdown. Age inevitably slows us up, but if it *stops* us, we die. There is such a thing as a momentum of life; we block it at our peril. Second childhood, like first childhood, cannot flourish except on a balanced regimen of work, play, and study. If the mind and character stagnate, the muscles and organs deteriorate. Old people must be taught to retain their lust for life—to laugh and love and live to the top of their capacity. If they fail to fulfil this simple formula, their "life" is merely dilatory death. As Lawton says, "The rocking chair type of senescent needs either vocational guidance, psychotherapy, or both. What he gets today is a better rocker."

What our society needs is a better philosophy and technique for the problems of the aged. We need sociotherapy for our social structure and its ideology as they are related to this problem. We need to transform our sociopsychosis into a socioneurosis and then to cure the neurosis. If we had enough social intelligence, we could solve the problem directly by scientific methods, but since we have not yet developed this method of attacking our social problems, we shall probably have to go through a long period of neurotic worry, anxiety, and confusion until we finally solve the problem by wasteful fumbling—passive adaptation—rather than by the rational, direct, and effective means of science-guided active adaptation.

At present, we waste our elders; we "honor" them by destroying their chance and inclination to work; by treating them like children; by making them into parasitic dependents; by regarding it as unseemly for the aged to indulge in mirth, to cut capers, or to go adventuring; we subject them to a false and crippling regimen which condemns them to become biopathic and psychopathic before their time. They die—but from rest and dry rot, not from the spirit of *Asolando*. I have known few people past 70 who were sources of inspiration and wisdom who were not also good laughers and eager participants in several forms of recreation. They also are workers and keep their minds alive. My father was such a man. At 65, he learned to "read music" and to play the piano; at 85, he still was an eager fisherman, an

excellent chess player, a passable fiddler, and a mean man in almost any kind of card game. He worked a little every day. He kept a "journal" of all the books he read from 1916, when he was 60, to the day of his death. It ran into hundreds of volumes, hundreds of thousands of pages and millions of words. He knew more about what was going on in the world than most people do at any age. He had a kind of folk-wisdom and retained till he died the intellectual and emotional honesty which distinguished him all his life.

When one begins to live in the past, the hand of death is upon him. Old people who live in the present and look forward to each succeeding day's work, play, and study usually live long and are happy. They also usually are healthier than those who believe all they can do is wait for death. I have questioned many normal people of 75 or more on how they feel about dying. Usually, they answer somewhat in the vein of Mother Dillard, a young lady of 75 who was one of my favorite "dates" during my first year in graduate school. She had four happily married children in town but insisted on keeping her own home. She "took care" of indigent college students at very little cost to them; she said they "kept her young". I am sure Jay Allen and I learned more "wisdom of life" from her that year than we did from most of our professors.

Her answer to my question was something like this: "Of course, I know I shall be dead in ten years or so but death does not seem any *closer* now than it did when I was a girl. Maybe I think about it even less. I have never enjoyed life so much as I do now—maybe it's because I know more than I did when I was young. The world is a lot better place to live in than when I was a girl—cars are better than wagons; everything is better now, even people. The main reason I hate to think about dying is that I'd like to see what will happen during the next fifty years. The only thing I can't bear to think about is getting old and helpless and being a burden. They ought to give old people a dose of something when they get that way."

Well, Mother Dillard did not get "that way". When she was 83, she worked in her garden one bright April morning before breakfast, as was her custom. Then she did her housework, read the paper, listened to the newscasts and some music, visited a little, went to bed—and didn't wake up in the morning. She was one of the most exciting and satisfactory persons I have ever known.

Old age "can be beautiful"—and thrilling and productive. I still can hear Mother Dillard's dry little chuckle as she said, "Sure, I'll go to the movies—just wait till I stack these dishes." I can still see the little line

of sweat edging her fine gray hair as she worked in her garden in the early morning. I still can hear the eagerness in my father's voice and see the glint in his eye when he was past 80: "It's about time for the salmon trout in the Big Nestucker now; they'll be bitin' in Hansen's Pool." I still remember the mock formality he used when he challenged me to a game of chess. I still marvel at John Dewey's *Logic: A Theory of Inquiry*, one of the few good books since 1900, written in what the world calls his "old age".

So I welcome the Great Invasion—but only if it gives us more people like Mother Dillard, John Dewey, and my father. It can—and I believe it will.

Let the hoary-headed horde come on! "This is it!"—the Great Invasion.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS  
OF AUGUST 24, 1912, AND MARCH 3, 1933**

Of Sociometry, A Journal of Inter-Personal Relations published Quarterly at Beacon, New York, for October 1, 1944, State of New York, County of Dutchess, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared J. L. Moreno, who, having been duly sworn according to law, deposes and says that he is the manager of the Sociometry, A Journal of Inter-Personal Relations and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation) etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Beacon House Inc., Beacon, N. Y. (and 101 Park Ave., New York City); Editor, George A. Lundberg, Bennington, Vermont; Managing Editor, Helen H. Jennings, Washington, D. C.; Business Manager, J. L. Moreno, Beacon, N. Y. (and at 101 Park Ave., New York City).

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*A Journal of  
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Volume VII

NOVEMBER, 1944

Number 4



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- Pitirim A. Sorokin: "Remarques on Sociometry"
- Henrik F. Infield: "Sociometry and the Concept of the Moment"
- Stuart A. Queen: "Job Analysis Versus Semantics"
- Leslie D. Zeleny: "The Value of Sociometry to Education"
- Irwin T. Sanders: "Sociometry and the Sociology Classroom"
- Merl E. Bonney: "Values of Sociometric Studies in the Classroom"
- Leona M. Kerstetter: "Sociometry and Social Agencies"
- E. DeAlton Partridge: "The Sociometric Approach to Adolescent Groupings"
- Nahum E. Shoobs: "The Psychodramatic Approach to Classroom Problems"
- Maria Rogers: "Sociometry and Adult Education"
- Theodore R. Sarbin: "The Concept of Role-Taking"
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*Contents*

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